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ABSTRACT

The Addiction Research Center Inventory is a 550 item multipurpose test measuring the broad range of physical, emotive, cognitive, and subjective effects of drugs. This manual provides technical information concerning 38 most valid scales, a quantitative method for characterizing the similarity of a profile of scores for the subject, group, or experimental condition with those found for 10 experimental drug conditions and six psychiatric groups, (normal, the mentally ill, alcoholic criminals, opiate addicts, and simulated mental illness determined in opiate addicts), a comprehensive listing of average test scores of all experimental conditions or groups tested, and the degree of similarity of the profile of scores for these conditions or groups with those found for 10 drug conditions and 6 psychiatric categories. The manual also provides some details of the history of the test, scoring, T-score transformation of scores, internal consistency and reliability of scales, and the validity of the scales for a number of purposes. A list of 101 references is included. (Author/SE)

AN OVERVIEW OF ADDICTION RESEARCH CENTER INVENTORY SCALES (ARCI):

AN APPENDIX AND MANUAL OF SCALES

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PREFACE

The main purposes of this review and manual are to provide the ARCI user with the 38 most valid scales, a quantitative method for characterizing the similarity of a profile of scores for the subject, group, or experimental condition with those found for ten experimental drug conditions and six psychiatric groups, a comprehensive listing of average test scores of all experimental conditions or groups tested, and the degree of similarity of the profile of scores for these conditions or groups with those found for ten drug conditions and six psychiatric categories. The manual provides some details on the history of the test, scoring, T-score transformation of scores, internal consistency and reliability of scales, and the validity of the scales for a number of purposes.

The most useful information on a group or condition tested is the average scores on the 38 recommended scales as these averages can serve as a standard for comparison in classification of subjects or groups. To maximize the accessibility of the average scores on 38 scales, all conditions and groups which have been tested on the whole ARCI have been assigned condition numbers. Studies have shown that there are differences among six psychiatric groupings and among ten drug conditions. These groups or conditions have also been assigned numbers. The condition identification numbers for the ten experimental drug conditions determined in opiate addicts are: no-drug (00 + 91), morphine (20), combined conditions for cyclazocine and nalorphine (23 + 25), pentobarbital (31), chlorpromazine (40), LSD (51), benzedrine (60), alcohol (81), conditions for opiate withdrawal (154 + 168), conditions for chronic opiate effects (151 + 152 + 153). The six psychiatric groups are: Mentally ill groups (26 + 27), normals (28), alcoholics (86 + 87 + 88), criminals (94), opiate addicts (170 + 173), and simulated mental illness determined in opiate addicts (307). These experimental drug conditions and groups as well as others have been placed in alphabetical order in the index for conditions and groups along with their identification numbers. These identification numbers have been applied in the text and must be used to find the descriptive information about conditions and their average scores (appendix table 2), corrected T-scores (appendix table 3), and the results of a similarity-dissimilarity index with the ten experimental drug conditions and the clinical groups (appendix table 4).

The manual, for the most part, presents results only when the total test has been given. In numerous pharmacological studies short forms or single scales of the ARCI have been used. In order to make this body of information available to the researcher, all references are given in which the whole test or part of the test has been used. In the subject index all of the drugs which have been used in the studies (even though not mentioned in the text) are referred to by reference number. For instance, levallorphan has been cited in references 37 and 66, but not in the text.

It is thought that the ARCI appendix of average scores on 38 scales should be periodically updated in order to make the ARCI maximally useful. This objective can be achieved if users will provide the author with the mean raw scores or actual test papers on any groups which they have tested. Actual test papers are of further interest for assessing results on additional scales that may be developed in the future.

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INTRODUCTION

The Addiction Research Center Inventory (ARCI) is a 550 item multipurpose test. The authors, Hill, Haertzen, and Belleville (1958), were mainly interested in developing a test which would be effective for measuring the broad range of physical, emotive, cognitive, and subjective effects of drugs, but at the time items were being developed it was also felt that the measurement of subjective experiences should be integrated into systems for the measurement of personality and psychiatric disorders (Haertzen, Hill, and Belleville 1963). Sociologic-type questions and categories were generally excluded, but such questions can be incorporated as a supplemental questionnaire as the ARCI answer sheet allows responses for more than 600 answers. The test was designed so as to be applicable to any literate English-speaking population, not just opiate addicts (Haertzen et al. 1963). References to drugs, with the exception of alcohol and cigarettes, were therefore excluded. However, supplemental questionnaires (example, SQ, on opiate withdrawal symptoms; Haertzen, Meketon, and Hooks 1970) can be constructed and used exclusively with addicts.

Questions for the ARCI were sampled from the responses which opiate addicts made to sentence completion stems while they were under no-drug or various-drug states (Haertzen et al. 1963). It was thought that the items so selected would be useful for the measurement of ordinary states of being as well as altered states of consciousnes. Results of simulations of affective states reported here attest to the general applicability of questions used to measure subjective states. The questions selected may show some bias for the measurement of psychopathic characteristics because addicts who exemplify such characteristics were used exclusively. Sampling of different types of psychopathology as well as subjective states was attempted by including items in subclassifications such as schizophrenia, depression, anxiety, euphoria, and so forth. (Haertzen et al. 1963). The classification is described under Item Development (pp. 3-5).

Two forms of the ARCI have been used that differ chiefly by the instructions applied. In the "standard instruction" subjects are asked to answer questions as they feel *today*; whereas, in the "simulation instruction" subjects are asked to respond as they would under some *specified state* such as: 1) some drug state, for example, the way they would feel under cocaine; 2) some specified abstract condition, such as the ideal self; 3) or in the way that some other group, for example, the mentally ill, would answer the questions.

German (Bättig and Fischer 1967), French (Pichot 1964), Spanish (Meketon and Perea 1967) and Swedish (Sjöberg 1969*b*) translations are available. Numerous short forms of the ARCI have been used by different investigators. The short forms consist of items from a single scale (Bättig and Fischer 1965, 1966, 1968; Biehl, Fuhrmann, and Seydel 1969; Ehlers 1966; Kiplinger, Manno, Rodda, and Forney 1971; Jaffe, Schuster, Smith, and Blachley 1970; Manno 1970; Meketon 1967; Ottomanelli 1973; Sjöberg 1969*a*; Zaks, Fink, and Freedman 1972; Zaks, Jones, Fink, and Freedman 1971) or else use a sample of items from several scales (Davis, Evans, and Gillis 1968; Isbell and Jasinski 1969; Isbell, Gorodetzsky, Jasinski, Claussen, Spulak, and Korte 1967; Jasinski, Haertzen, and Isbell 1971; Jasinski and Mansky 1972; Jasinski, Martin, and Haertzen 1967; Jasinski, Martin, and Hoeldtke 1970, 1971; Jasinski, Martin, and Sapira 1968*a*, 1968*b*; Martin 1967; Martin, Jasinski, and Mansky 1973; Martin, Sloan, Sapira, and Jasinski 1971; Rosenberg, Isbell, and Miner 1963; Rosenberg, Isbell, Miner, and Logan 1964; Rosenberg, Wolbach, Miner, and Isbell 1963). The short forms can be quickly administered and are especially useful for showing potency, time actions of drugs, and whether a drug effect is present. Martin (1967) and Jasinski, Martin, and Hoeldtke (1971) especially have used three scales which summarize the power of the total test. The items in the short forms of these three scales PCAG–452, MBG–453, and LSD–454 are given in appendix table 1. These scales refer to psychotomimetic (LSD), sedative (PCAG), and euphoric (MBG) effects and distinguish between the agonistic effects of opiates and opiate antagonists. Thus, morphine and morphine-like drugs produce an elevation on MBG and none on PCAG or LSD. Nalorphine and nalorphine-like drugs produce an elevation on LSD and PCAG and none on MBG. Martin (1967) and Jasinski, Martin, and Hoeldtke (1971) have elaborated on the pharmacological methods for determining equivalence of drugs and the potency of drugs in the same class using the short scales. Relevant short scales yield potency estimates and time action curves that are similar to those found for relevant physiological measures. In testing opiates, similar results have been found using MBG and pupillary constriction. These bioassay methods emphasize the determination of dose equivalents, parallelism of dose effect, and so forth. The dose effect is also one possible criterion for scale construction, but it gives no complete protection against oversampling of questions which measure a general drug effect.

The main limitations of short forms are that they encourage studies with drugs in a restricted category; control over the measurement of a general drug effect is more difficult to achieve and the presence of items which measure a general drug effect may overly encourage erroneous conclusions about the similarity of drugs; each short form requires its own methodology; none of the short forms contain any estimate of a subject's carelessness. The utility and validity of short forms have to be individually substantiated as in the Martin (1967) and Jasinski, Martin, and Hoeldtke studies (1971). Validity, of course, cannot be taken for granted when scales established for one group are applied to other types of populations (Sicé, Levine, Haertzen, and Levine 1972). Discriminant function methods for differentiating drugs and clinical groups have been worked out for the total test, but not for the short forms. Direct extrapolation of the total tests with short forms is theoretically possible because response probability for a true or false response seems to be unaffected by the order or sampling of questions (Haertzen and Hooks 1968). However, unless item selection for short forms from scales is random the configuration of results for a total scale or for all scales can never be precisely duplicated. Greater memory is required to keep track of results on each form. No one has attempted to make a short form by randomly selecting items from each of 38 scales. However, the author has made up two separate short forms of 300 items each. One contains the main scales for measuring drug effects and the other contains the main clinical scales. The forms have been used in drug association experiments (Haertzen and Hooks 1973). These forms contain all items in certain scales, but the forms cannot be considered entirely satisfactory, especially the drug-oriented form, since it is thought that drug patterns from one population or clinical group to the next would be applicable providing the scores from the drug-oriented scales have been corrected for differences of groups on clinically oriented scales. This manual generally covers only results on the total test; however, the bibliography presents a complete listing of all studies known to the author. Several hundred scales have been developed for the ARCI. Each scale has been numbered for specific reference. Eisenberg (1973) has presented all scale numbers from the appendix as well as empirical drug scales on each item in which the scale has been used. Scale development has been stressed as a means of showing the broad characteristics associated with drugs or clinical conditions. Isolation of the characteristics associated with a variable at an item level may have significance for writing new questions for supplemental questionnaires that may be more discriminating, at least at an item level. Scales have been developed to reflect every variable (drugs, clinical groups, and simulation conditions; see index) that has been studied. Scales are included in the appendix only if they define independent sources of variation determined by discriminant function analyses to be described. The advantages and disadvantages of the discriminant function method will be described later under "Selection of Scales" (pp. 12-21). Empirical drug scales (Hill, Haertzen, Wolbach, and Miner 1963*a*,*b*) have been excluded as they tend to measure a general drug effect and have considerable item overlap (Haertzen 1966*a,b*) and did not survive discriminant function analyses. Depending on the purpose of the investigation such empirical scales may be useful since they do show the *main subjective effects* of a particular drug. The user of the test should realize that one or more scales have been developed to represent each variable and each of these scales is available on request. Such scales variously cover: ideal self, anxiety, characteristics of one's mother or father, and sexual intercourse in the simulation series, to the empirical drug scales mentioned above. The index of conditions following the appendix gives the indication of possible scales.

One of the main uses of psychometric tests is classification. Two forms of classification have been incorporated in this manual. One classification includes clinical groupings and faking bad. Faking bad is indexed by a simulation of mental illness. The other classification is for subjective drug effects plus chronic and withdrawal effects of opiates. These broad classifications are not considered the only possible ones, and others have been tried. These merely are the ones on which comprehensive results and procedures for classification have been delineated here. Other levels of clasification could be considered. For instance, some users could conceivably find a classification based on the categories of simulated affective states including pleasantness, depression, anxiety, danger, and excitement as more reasonable. Others may wish to use a classification based on attributed characteristics of mother, father, ideal self, addicts, etc.

The method of classification employed is based on discriminant function procedures (Rao 1952). This method appeared most desirable as it allows for some correction for major sources of individual differences variability common to a number of scales. Discriminant function methodology is laborious if carried to the extreme. The labor for using the technique is reduced by limiting the number of scales on which corrections are made. Four corrector scales have been used: two that are important for clinical groupings (a maladjustment and a psychopathic scale) and two which are important for showing drug effects (scale of reactivity, stress, or opiate withdrawal and a scale for efficiency of functioning). The corrections are described under the section for obtaining T-scores (pp. 32-36). The classification system based on Discriminant Function Analysis is given on pages 33-37.

In predictive studies ARCI scales may be used as individual difference variables. Several studies suggest that scales may have a factor analytic or structural significance that is fairly constant in going from one group to another or in testing from one condition to another. However, when individuals are tested under different conditions, different individuals may define the same essential structure. Thus, the persons who give a high extroversion response under standard no-drug testing conditions may not be the same persons who show high extroversion under instructions to answer questions in the way they feel when they are under the influence of alcohol. The same scale might have differing predictive significance depending on the instructions. The predictive power of the scales may vary depending on the test-taking instructions given.

ITEM DEVELOPMENT

A detailed description of the development of the ARCI was presented elsewhere (Haertzen et al. 1963). It contains 550 structured items to be answered true or false. Most of the items are original items and were obtained through preliminary investigations of subjective effects of morphine, amphetamine, pentobarbital, chlorpromazine, and marihuana, but 40 items were selected from the Minnesota Multiphasic Personality Inventory (MMPI). The principal technique for obtaining unique content consisted of having subjects fill in sentence completion stems while they were under the acute effects of some of the above-named drugs or under a no-drug condition. A pool of 3300 items was ultimately reduced to 550 items through elimination of similar questions and consensual agreement of the test developers. To insure sampling of a wide variety of content, the 3300 items were judged for acceptability within categories shown in table 1. The

TABLE 1
CLASSIFICATION OF ARCI ITEMS[a]

	N
1. General Information	
a. family	16
b. law	3
2. Interests and Drives	
a. interests in activity now	20
b. energy	15
c. general interests (occupation)	
d. appetite	10
e. sex	23
f. sleep	7
3. Sensation and Perception	
a. hearing	6
b. internal sensations	10
c. kinesthetic sensations	7
d. pain	7
e. smell	2
f. taste	6
g. time	4
h. touch	4
i. vision	17
j. temperature	5
4. Bodily Symptoms and Processes	
a. head	7
b. nose and lungs	4
c. body image	2
d. muscular coordination	10
e. mouth, throat, stomach	10
f. heart	
g. nerves	4
h. skin	2
i. speech	5
j. extremities	6
k. neck	1
l. excretion and genitals	5
m. eyes	7
n. ears	6
5. Feelings and Attitudes	
a. Ability	
1) general discouragement or confidence	18
2) concentration	15
3) memory	2
4) specific skills	3
5) maturity	5
6) social expression	15
b. reactions toward the test	11
c. attitudes toward people	45
d. attitudes toward institutions	4
e. content of thought	7
f. character traits	
1) empathy, sympathy	7
2) control, patience	
3) hostility	44
4) impulsiveness vs. planning	19
g. Schizophrenia	
1) affect	10
2) loss of interest	5
3) idea of things being changed	4
4) ideas of reference, mind reading	5
5) hallucinations	6
6) supernatural powers	2
7) feeling of being abused	20
8) suspicion	3
9) weird experiences	15
10) general characteristics	15
h. Expression	7
i. Fears	
1) fears	11
2) anxiety	6
3) nervousness	13
4) "bothered by..."	6
5) pain	[illegible]
j. Guilt	
1) guilt	8
2) worry	15
3) depression	10
k. Mood	
1) state of feeling	12
2) euphoria	14
3) depression	7
4) excitement	12
l. Interpersonal relations: much overlap with other categories	20
m. Orientation	8
n. Philosophy of life	10
Total	550

a. Table 1 was originally adapted from a dissertation (Haertzen 1961). A complete list of items for each category is also given

b. N= number of items

table indicates the final number of items in each category. Items were classified under more than one heading so there is a considerable overlap of items in general categories such as bodily symptoms and sensation and perception. Drugs produce more changes in response to items in these two categories than the remaining ones. Relatively more items were sampled from category 5, Feelings and Attitudes, on which relatively fewer drug effects were noted. Subcategories i and k for fears and mood are exceptions. A complete listing of items in different categories is listed elsewhere (Haertzen 1961). Condensed categorizations have been used to facilitate description of drug effects (Haertzen 1970; Haertzen et al. 1970). Items were carefully edited through consideration of the Thorndike-Lorge word counts (1944) so most of the items contain words which are below the sixth grade difficulty level. The average difficulty of the most difficult word in each items is at the third grade level. Other secondary characteristics of items were also considered. Thus, with the exception of alcohol, drug names were not included, so the instrument would be useable with any literate English-speaking population. Items were predominantly phrased in the present rather than the past tense because this characteristic was associated with drug effects. Print is larger than in most tests so even subjects who have moderate visual impairment may complete the test. Supplemental questionnaires have been developed to explore some specific content areas more thoroughly. SQ_4 (Haertzen et al. 1970) was developed to assess classical subjective effects of opiate withdrawal.

SCALE DEVELOPMENT

Rational Validity Scale, Carelessness (Ca #0)

One hazard in giving a test over and over is that subjects may become uncooperative. In anticipation that some subjects would be uncooperative, a rational validity scale was incorporated (Haertzen and Hill 1963). The original scale consisted of 30 paired items that were repeated exactly or in logically opposite form. The scale was subsequently shortened to 23 paired items because it was found that responses to some logically opposite items were highly inconsistent. Items were eliminated on which the discrepancy between responses for paired items was 23 percent or greater. Ca is described more extensively under scoring.

Empirical Drug Scales

Seven empirical drug scales (Hill et al. 1963*a*,*b*) were developed by selecting items which differentiated placebo from each drug at the .05 level with McNemar's chi-square test for paired replicates (Edwards 1957). The drugs, dose, and number of subjects used for the drug-placebo comparisons, were as follows: morphine (N = 80, 20 mg, condition 20—see appendix table 2 for description of conditions in numerical order), pentobarbital (N = 100, 200 mg, condition 30), chlorpromazine (condition 40, N = 100), LSD-25 (N = 100, 1.5 mcg/kg, condition 51), amphetamine (N = 100, 30 mg, condition 60), pyrahexyl (N = 100, 90 mg, condition 71), and alcohol (N = 50, 3.0 cc/kg of 30% alcohol, condition 81). These groups were referred to as the revised "test development" groups. The Ns given in the appendix refer to both the test development sample and a cross validation sample.

Originally two empirical scales were developed for each drug (Haertzen, Wolbach, Wikler, Hill 1961; Hill et al. 1963*a*,*b*) except for alcohol. A so-called "Significant Scale" consisted of those items which differentiated both a test group (first half of Ns shown above for a particular drug condition) and a cross validation group (second half of Ns shown above). A second scale, "Marginally Significant Scale," consisted of those items which failed to hold up under cross validation but which, nevertheless, differentiated the placebo and drug condition at the .05 level for the total sample (revised test development group). It was subsequently demonstrated that these scales were equal in power to differentiate drugs and placebo, so they were combined. The scale numbers and abbreviations for the combined significant and marginally significant items are as follows: 3–C, Chlorpromazine; 5–P, Pentobarbital; 6–A, Alcohol; 8–M, Morphine; 9–B, Benzedrine; 13–L, LSD; 16–Py, Pyrahexyl). Scale numbers are used to avoid confusion.

The complete listing of actual content is given by Hill et al. (1963*b*), but Hill et al. did not number the scales in this way. The standardization of the combined "Significant and Marginally Significant" scales was on opiate addicts. These two classes of scales refer to characteristics of subtle and obvious or primary and secondary effects of drugs (Haertzen 1961; Hill et al. 1963*b*) and the items within these have different factor loadings (Haertzen 1961). The items in the significant scales have higher first factor loadings in the appropriate drug condition (drug that a scale was developed for) than items in the marginally significant scales.

An empirical scale has also been developed for the narcotic antagonists cyclazocine and nalorphine (#152) which is not included here because it measures too much of a general drug effect (Haertzen 1970). The rationale for scale selection or exclusion is presented under Selection of Scales.

Group Variability Scales

There is an extensive amount of item overlap in empirical drug scales. Thus, there were 23 items which differentiated no-drug and each of the drugs (Hill et al. 1963*a*). The number of overlapping items shrinks somewhat in a placebo-drug comparison. The overlap is not a chance event since there is a moderate correlation between drug-placebo differences for different drugs or there is a generalized drug effect (Haertzen 1962). It was felt that differentiation of drugs would be improved by scales which reflected patterns of drug effects (Haertzen 1966*b*).

Pattern here refers to the configuration of the percentage of "true" responses (derived from the N for the revised test development groups) for 11 conditions (includes drug conditions mentioned above plus no-drug (N = 100, Condition 00), LSD (1.0 mcg/kg, N = 100, Condition 50), pyrahexyl (60 mg, N = 100, Condition 70), and placebo (N = 100, Condition 01). Five configurations were found. The first pattern was characterized by a high percentage of "true" responses for morphine and amphetamine relative to other conditions, i.e., no-drug, placebo, chlorpromazine, LSD, pentobarbital, pyrahexyl, and alcohol. These were predominantly euphoria items. The characteristic of this pattern as well as others is designated by the sequence of letters referring to drugs. The *G* following the drug abbreviations refers to the method of scale development; that is, *G* refers to group variability and the predominant method was diagonal factor analysis (Fruchter 1954 or shortened methods, Haertzen 1963*b*) of group variability patterns (Haertzen 1966*b*). The scales developed were as follows: (Scale abbreviations are preceded by scale numbers. Scales in the following list, unless otherwise indicated, are included in appendix table 1.)

10—MBG, Morphine and benzedrine: It contains mostly euphoria items. A high score indicates that a subject feels popular, pleasant, talkative, happy, and so forth. Scale 453 is a short form for MBG-10 reported by Jasinski, Martin, and Sapira (1968*a*).

4—PCAG, Pentobarbital, chlorpromazine and alcohol: It contains items on fatigue and low motivation. Those with high scores complain of fatigue, weakness, slowness, sluggishness, or a heavy feeling and low motivation. Scale 452 is a short form for PCAG–4.

79—LG, LSD: It includes items on anxiety, tension, depersonalization, and difficulty in concentration (not in appendix table 1, Haertzen 1966*b*).

12—BG, Benzedrine: Items suggest intellectual efficiency and energy.

7—AG, Alcohol: An alcoholic high feeling, hangover, feeling of being abused, dizzy, and so forth, are relatively specific effects of alcohol.

The remaining patterns are obliquely related to patterns mentioned above, but they also contain some unique variance.

11—MG, Morphine: Examples of items include itchy nose, decreased sex drive, admission of bad habits, envy, and guilt.

19—MBLG or Ex, Morphine, Benzedrine and LSD or Excitement: The label excitement indicates the predominant content such as increase in bodily sensations. Ex is positively related to MBG and LG and negatively related to PCAG.

15—Ma, Marihuana: This scale (Haertzen 1966*b*) refers to a marihuana drug studied by Belleville (Haertzen et al. 1963). It contains many symptoms such as dry mouth and blurred vision and is correlated with the LG pattern. Because the scale measured a general effect it was revised by the Drug Correction Method (see below) so that nonmarihuana effects were corrected (Mar, #52, marihuana; Jasinski et al. 1971*a*). To measure minimal marihuana effects, the original Ma scale #15 is useful.

Drug Correction Scales

The drug correction scales (Haertzen 1966*b*) are similar to group variability scales; some of these were derived partially through consideration of a criterion analysis of drug effects which also included the factor loadings from group variability scales (Haertzen 1962). Thus, chlorpromazine effects were polar to those for other drugs especially amphetamine and morphine on a second factor. In order to reflect the polarity, the most significant chlorpromazine items were scored in the chlorpromazine direction and items representing the most common effects of other drugs were scored in the opposite direction of that used in empirical scales. Euphoria items (morphine and amphetamine effects) were scored "false" rather than "true." The scale developed by this method was called chlorpromazine specific (CS-Scale #17). Corrections were continued until the scores for all drugs were equal to or less than placebo.

18—M-L, Morphine minus LSD (not in appendix table 1): It consists of the most significant morphine items (scored in the direction of morphine) and the most significant LSD items (scored opposite of the LSD direction) and polar items (the percentage of "true" responses for morphine was greater than placebo and the percentage of "true" responses for LSD was less than placebo). This scale is of interest because morphine produced a considerable elevation on the LSD empirical scale (L-13). The scale contrasts anxiety and euphoria.

21—LSD specific (referred to as LS in Haertzen 1966*b*): It consists of the most significant effects of LSD and a correction for the effects of each drug in the series. Correction was continued until the means for all drugs in the series with the exception of LSD were roughly equal to no-drug or placebo. Scale 454 is a short form for scale 21.

153—NAnt, Narcotic Antagonist (Haertzen 1970): This scale contrasts the effects of nalorphine (condition 25) and cyclazocine (23) with those for morphine (20).

Factor Analytic Scales

Factor analytic scales with the exception of the General Drug Predictor Scale (GDP, scale #2) were developed predominantly with the multiple group method of factor analysis (Fruchter 1954). The factor scales were generally developed to reveal sources of individual differences on the ARCI.

2—GDP, General Drug Predictor Scale: The items from GDP were selected so that they would correlate with the first factor of this series (Haertzen 1965*a*) and the seven empirical drug scales (mean tetrachoric of .3 or greater), but would not differentiate between placebo and any of eleven drug conditions using chi-square for independent measurements. GDP is a predictor scale because it predicts scores on all empirical drug scales, but it is also a control scale because it refers to the behavioral response that would be obtained under no-drug or placebo conditions. Most of the items are hostility items. The correlation between GDP and a rationally derived hostility scale (scale has no number) was .81.

20—GDE, General Drug Effect: The original GDE scale #20 was based on correlation with the seven empirical scale markers used for GDP plus four more. Items were selected with factor loadings of .70 or greater and which also differentiated placebo from at least one drug in the series (Haertzen 1962). The content is quite varied and contains items on anxiety, euphoria, difficulty in cognition, distress, sluggishness, physical symptoms, sensation and perception, depersonalization, etc. This scale is considered a good scale for showing general drug effects and has been used in many studies for this purpose. It has been dropped from the recommended list because its power is similar to the reactivity scale (#101) and another version of a GDE measure (scale #125). The second series of 10 factor analytic scales was based on a group factor analysis of 550 items for 100 subjects under the LSD condition #51 (Haertzen 1965*b*). Markers were chosen partially on the basis of preliminary factor analyses (Haertzen 1961) with the principal axis factor method and quartimax rotation (Neuhaus and Wrigley 1954). All items had factor loadings of .3 or greater and the percentage of "true" responses fell within the 10–90% range for the LSD condition. Also, generally no more than 60 items were selected for each scale. This meant that the lowest loading on some factors was higher than .3; the lowest loading on factor A (reactivity scale #1) was .80. The names for factors give the essence of interpreted content except for factor A. Factor A was called reactivity and indicates a characteristic almost identical to that of the GDE scale #20 mentioned above. The reactivity scale contains a relatively greater percentage of anxiety questions than GDE (#20) because fewer items were selected.

The factor analytic scales are listed as follows:

1—Re, Reactivity, Factor A: Item content is varied and includes items on anxiety, difficulty in concentration, physical symptoms such as weakness, lump in the throat, and perceptual changes such as a feeling that things look dreamlike. This scale was lengthened (Scale Re #101) by a procedure to be described under Criterion Scales. It is a powerful individual difference scale and could be considered for short forms.

22—Ef, Efficiency, Factor B (not in appendix table 1): It includes items on intellectual, social and physical efficiency, increase in interests, and some euphoria. Ef-scale 22 is also a powerful individual difference scale, but a revised Efficiency scale (#87, see criterion scales) was accepted.

23—PI, Patience-Impatience, Factor B_1 (not in appendix table 1): The positive end of the scale includes patience and absence of nervous habits. The negative end includes impatience, resentment, and excitement. The scale is similar to self-control (#111, see criterion scales) which is given in appendix table 1.

24—Se, Sentimental, Factor C (not in appendix table 1): This scale includes items that suggest sentimental feelings and attitudes such as preoccupation with past interpersonal relations, failures, successes or disappointments, and loneliness. It also suggests liking for a drink of alcohol. It is negatively related to social withdrawal (Scale #108, see criterion scale) which is recommended.

25—Un, Uncritical, Factor C_1 (not in appendix table 1).

26—Im, Immature, Factor D (not in appendix table 1): A modified version (Im_2 #37) is of interest for the measurement of individual differences.

27—MF, Masculinity-Femininity, Factor E (not in appendix table 1): A Masculinity Scale #56 is of interest for the study of individual differences.

28—In, Inadequacy, Factor F (not in appendix table 1).

29—Imp, Impulsive, Factor G: The main markers include impulsiveness, doing things on the spur of the moment, susceptibility to boredom, interest in exciting activity, and lack of discouragement.

30—NP, Neurotic Sensitivity vs. Psychopathic Toughness, Factor H (not in appendix table 1). Another psychopath scale (Pyp #102, see criterion scales) was developed.

The above factor designations were employed in the factor analytic study and are not used hereafter. The most promising factor analytic scales include Reactivity, Efficiency, Patience-Impatience, Sentimentality, Impulsivity, and Psychopathic Toughness. Some form of these individual difference measures have been accepted. Masculine-femine differences are regularly found on the ARCI, but the Masculinity Scale (#56) is not recommended for routine use.

Factor Analytic Scales, Uniform Factors for the ARCI, MMPI, CPI and GZTS

An attempt was also made to determine uniform common factors among the ARCI (Condition 00), MMPI (Condition 03, Hathaway and McKinley 1951), California Psychological Inventory (Condition 04, CPI, Gough 1957), Guilford-Zimmerman Temperament Survey (GZTS, Condition 02, Guilford and Zimmerman 1949), and the 16 P.F. (Condition 05, Sixteen P.F. Test, Form A, 1950 version) in opiate addicts for a no-drug condition. Scales were factor analyzed from the first four tests (Principal Axis Factor Analysis, with quartimax rotation, Neuhaus and Wrigley 1954). A marker (one scale most highly correlated with a factor) was chosen to represent each factor, and these markers were correlated (tetrachoric) with all items from the above five tests. The markers used in this study and the associated scales developed for the ARCI are listed in table 2. The analysis is mainly of interest for showing which ARCI scales are related to the main dimensional markers from other tests, the internal structure of the ARCI, and the utility of scales in various tests for revealing individual difference dimensions.

TABLE 2
FACTORS FOR THE MMPI, CPI, GZTS, AND ARCI

Scale	*Factor Number*	*Test*	*ARCI No. and Scale*
Tolerance	1	CPI	31 Hostility (See GDP #2, Critical #112)
Schizophrenia	2	MMPI	32*
Sociability	3	CPI	33*
Efficiency #22	4	ARCI	34 (see ARCI Ef #87)
Thoughtfulness	5	GZTS	35*
Masculinity-Femininity	6	MMPI	36 (see Masculinity #56)
Immaturity #26	7	ARCI	37*
Restraint	8	GZTS	38 (see ARCI Imp. #29)
General Drug Effect #20	9	ARCI	39 (see ARCI GDE #125)
LSD #21	10	ARCI	40 (LSD #21 is used)
General Activity	11	GZTS	41*
Communality	12	CPI	42*
Sentimentality #24	13	ARCI	43 (see SoW #108)

*The items in these scales are listed in the Appendix, Table 1.

Scales in table 2 which are starred were included in the appendix of scales, as these scales showed some promise of revealing individual differences measured by the ARCI. None of the above ARCI scales derived from this analysis are recommended for routine use, since they failed to provide independent sources of differences between criterion groups to be described. The recommended alternate scales are indicated in parentheses. Some of the nonrecommended scales are, nevertheless, powerful individual difference variables. Tolerance from the CPI (opposite hostility) is the scale which was substantially correlated with items from all of the tests. Sociability was measured by all tests. Items from the MMPI were highly correlated with the Schizophrenia Scale, but, surprisingly, items from other tests had low correlations with it. Restraint was measured best by the GZTS. Reactivity or the General Drug Effect (#39) and Efficiency (#34) were most effectively measured by the ARCI. The scales representing the uniform factors have been used in a study of simulated effects of opiate withdrawal to provide a common basis for comparison of the different tests and are reported under the section on validity (see table 14).

Empirical Scales for Clinical Groups

A set of empirical scales has been developed to show differences between normal, mentally ill, alcoholic, criminal, and addict subjects. The Psychopathic Scale (#60, Haertzen and Panton 1967), the only published scale in this series, consisted of those items which differentiated criminals, alcoholics, and opiate addicts from normal and mentally ill subjects. Maladjustment (#58) distinguished between the four clinical groups and normal subjects. The Mental Illness Scale distinguished the mentally ill group from the four remaining groups (#59). Scales for addicts (#57), alcoholics (#61) and criminals (#62) differentiated each of these groups from the remaining groups. None of these clinical scales has been included in the appendix, although scales correlated with these have been included (see criterion scales). In addition, a Masculinity Scale (#56) consisted of items which correlated with the Masculinity-Feminity scales of the MMPI, CPI, GZTS, and an early MF scale (Factorial Scale #27) of the ARCI as found in addicts (Condition 00) and differences between males and females in the normal (28) and mentally ill groups (26 and 27). While the Masculinity Scale (#56) has been included in the appendix, it is not intended for routine use.

A comprehensive set of scales was derived from tests on the mentally ill (26 and 27) group (Haertzen, Long, and Philip 1964), to reflect each diagnostic category and drugs given as well as chronicity. Chronicity (#63) refers to the prediction of the length of time spent in a State hospital and was the best scale of this series. A correlate of this scale, Social Withdrawal #108, is included. As in addicts, a general drug effect was found in the mentally ill group (distinguishes between subjects who were and were not given a drug as part of their treatment, #64), but it overlaps in function with the General Drug Effect scales already mentioned so it is, therefore, excluded. Drug scales derived from the mentally ill group are not pure scales as drug effects are potentially confounded with diagnosis; some drugs such as Dilantin were regularly given to subjects who had epilepsy. Psychopathic types tended to be given no drug at the St. Peter State Hospital, Minnesota (Haertzen et al. 1964).

A set of empirical scales was constructed which distinguished between alcoholics during alcohol withdrawal (day 2 after admission and treatment for withdrawal, Condition 85) and after withdrawal (weeks 1, 2 and 3 after admission, Conditions 86, 87, 88; Sharp, Fuller, and Haertzen 1967). An Alcohol Withdrawal Specific Scale (#55, AWS) was accepted; the AWS scale showed an alcohol withdrawal effect in alcoholics and a minimal drug effect for seven drugs in opiate addicts (Hill et al. 1963*a*). A Sense of Humor Scale (#223) distinguished between the effect of alcohol withdrawal (Condition 85) in alcoholics (Sharp et al. 1967), and an alcohol effect in opiate addicts (Hill et al. 1963*a*). Another alcohol withdrawal scale (#220) distinguished between the relative effects of alcohol withdrawal (Condition 85 vs. Conditions 86, 87, 88) found in the Sharp et al. study (1967) and the strong (154 for withdrawal vs. 150 for no-drugs) and weak opiate (Condition 168 for withdrawal and 170 for recovery from withdrawal) withdrawal effects in opiate addicts (Haertzen et al. 1970). Separate empirical scales for strong (scale SOW #207) and weak opiate withdrawal (scale WOW #191) were constructed as there appeared to be some curvilinearity of opiate withdrawal symptoms (Haertzen et al. 1970). In addition a scale with the most significant weak opiate withdrawal effects plus items which suppressed drug effects was also developed to insure differentiation of drug and withdrawal effects (WOWs #199). A Chronic Opiate Scale (Chr Op #161) differentiated between opiate addicts on chronic morphine (240 mg/day) or heroin (95 mg/day) after 3.5 months (Conditions 151, 152, 153 from their no-drug control (Haertzen and Hooks 1969).

Scales for Test Taking Attitudes

A set of test-taking scales was derived from addicts on the basis of their responses for a no-drug condition (Haertzen and Hooks 1968). An Infrequent True Response Scale consisted of those items which were answered true infrequently (IT #47). A scale with equal item variance under a no-drug condition (00) for opiate addicts was constructed for items with infrequent false responses (IF #48). A Social Undesirability Scale (#49 not included) consisted of the sum of scores on scales #47 and #48. A Response Set Scale (#50 not included) contained items from scale #47 (scored as they are in #47) and the items in scale #48 (but scored as true rather than false). Comparable scales using identical procedures were constructed for the MMPI, CPI, and GZTS. The utility of test-taking attitude scales will be discussed under scoring for carelessness.

Criterion Scales

Eysneck's concept of criterion analysis (1950) influenced the development of criterion scales. As indicated elsewhere (Haertzen 1969*b*) the type of scale that is regarded as most likely to be useful is one in which the individual differences defined by a scale are correlated with the corresponding differences which can be found among criterion groups at an item level. Individual differences at an item level are indicated by the correlation between a scale and items holding a group constant or relatively constant. It should be noted here that empirical scales involve a comparison between criterion groups and allow individual differences to freely vary. The same is true for the group variability scales. The factor analytic scales based on individual differences within one condition are determined by the group membership only insofar as group or condition membership determines individual differences (Haertzen 1966*b*). Scales developed by correlating items with some scale may define differences between groups at an item level in the predicted way, but this need not be the case. The ARCI Schizophrenia Scale #32 made up of items which correlated with the MMPI Schizophrenia Scale actually distinguished between mentally ill and normal subjects in the opposite of expectation (Haertzen 1969*b*). An Alcohol Withdrawal Scale (AWS, #55) has been regarded as a good scale from the criterion analysis standpoint because the items that were most highly correlated with AWS holding conditions constant also were the ones which differentiated alcoholics during withdrawal from those not experiencing withdrawal (Haertzen, Hooks, and Hill 1966). The Reactivity Scale (#1, Haertzen 1965*b*) also seemed commendable because the reactivity factor loadings determined under LSD were correlated with the observed differences between LSD and the placebo or no-drug conditions (Haertzen 1961, 1966*a*).

To obtain a set of scales which simultaneously correlate with individual differences and criterion group differences, a factor analysis of these determinants was done; 263 variables were included in the analysis. Patterns were shown as a percentage of true responses for the variable or condition. To illustrate, the percentage of true responses on each item for each of the drug conditions, no-drug (00), placebo (01), morphine (20, 21), pentobarital (30, 31), alcohol (81, 82, 83, 84), pyrahexyl (70, 71), benzedrine (60, 61), LSD (50, 51), and chlorpromazine (40) in opiate addicts (Hill et al. 1963*a*; Haertzen 1966*b*), nalorphine (24, 25, 109) and cyclazocine (22, 23, 108) in opiate addicts (Haertzen 1970), opiate withdrawal (123) (Haertzen and Meketon 1968), alcoholics (85) on and off withdrawal of alcohol (86, 87, 88) (Haertzen and Fuller 1967), mentally ill (26, 27) and subclassifications within this group (Haertzen et al 1964), normals (28) and criminals (94) (Haertzen and Panton 1967) constitute the criterion group effects.

The effects of individual differences were dealt with in a number of ways. The percents of responses were included for those above the median within the drug conditions on the empirical drug scales designed for them. This procedure was also followed on a sample of ARCI scales, including those for uniform factors, in the addict no-drug condition (00), mentally ill (26 and 27), alcoholics (85, 86, 87, 88) and criminals (94), the mentally ill who were above the median on MMPI scales and addicts above the median on factor markers for the ARCI, MMPI, GZTS, and CPI on the no-drug conditions from the study of uniform factors (see pp. 8-9). To further sample individual differences, 91 items were correlated with all other items with 978 subjects including addicts in the no-drug condition (00), alcoholics not in withdrawal (86, 87, 88), mentally ill (26, 27), normals (28), and criminals (94). Table 3 of the appendix gives further details about the conditions. Percents in the case of items refer to the percentage of subjects who answered a question true and who also answered another question true. For example, if 500 subjects of the 978 answered question X true and if 250 of the 500 answered question Y true, the percent referring to X on Y (100 X 250/500) would be equal to 50.

A sample of these patterns on items plus available scales was factor analyzed (P.A.F.A., quartimax rotation). The patterns for the items or scales which were most highly correlated with each of these factors were in turn correlated with the patterns for all 550 items. Corrections for factors were done by the diagonal method (Fruchter 1954). Scales were developed to reflect these patterns. If a scale happened to be most highly correlated with a factor it was retained as it was or lengthened. The following scales were determined in this analysis and survived the discriminant function analyses to be mentioned later:

101 Reactivity, Re, correlated with Reactivity Scale #1 (Haertzen 1965*b*).

102 Psychopath, Pyp, correlated with Psychopath Scale #60 (Haertzen and Panton 1967).

10 Morphine-Benzedrine Group Variability Scale, unmodified (Haertzen (1966*b*).

108 Social Withdrawal, SoW, correlated with Chronicity Scale #63 for mentally ill (see p. 9).

111 Self-Control, Con, correlated with item 178 (My sex life is satisfactory); the scale is similar to the factor analytic scale Patience-Impatience #23 (Haertzen 1965*b*).

127 Maladjustment, Mal, correlated with empirical maladjustment scale #58.

125 General Drug Effect, correlated with GDE scale #51 (Haertzen 1963*a*).

123 Tired, correlated with item 66 (I feel drowsy).

29 Impulsive, Imp, (unmodified) (Haertzen 1965*b*).

143 Interests, Int, correlated with item 128

(I like to read about the human mind).

115 Taste, correlated with item 413 (I have a bitter taste in my mouth).

112 Critical, Cr, correlated with item 115 (Lots of people do mean things just for the hell of it).

The above order represented the order of diagonal factor extraction. Several other scales were developed that were based on slightly different orders of extraction and/or item markers. These are:

87 Efficiency, EF, correlated with scale #22, Efficiency (Haertzen 1965*b*).

106 Popularity, Pop, correlated with item 3 (I feel as if I would be more popular with people today).

122 Weak, correlated with item 11 (I am not as active as usual).

129 Drunk, Dr, correlated with item 462 (I have a high feeling which is similar to that produced by alcohol).

136 Competition, Com, correlated with alcohol group variability scale #7 (Haertzen 1966*b*).

145 Projection, Proj, correlated with item 355 (An alcoholic should not be given a driver's license).

Simulation Scales

Simulation scales, with the exception of simulated opiate withdrawal (#158) and simulated acute effects of opiates SimO (#163), have not been evaluated by the discriminant function method along with the recommended ARCI scales, so there is no certain way of judging whether they have any special efficacy. The Simulated Opiate Withdrawal Scale (#158) added nothing to discrimination of conditions over the opiate withdrawal scales already mentiond. The Simulated Acute Opiate Scale SimO (#163) has something in common with MBG (10), the scale which shows the principal euphoric pattern of effects of morphine and amphetamine. However, since SimO (#163) samples some negative qualities that are common to simulated drug effects, not just opiate effects, the scale was included.

SimO is probably not the best estimate of the simulated drug effect. Scale #445 (not in discriminant function analyses, in appendix) may be best for this purpose as it collectively most highly discriminated between the following pairs of simulated and actual conditions (simulated opiate –244 vs. actual opiate –20, simulated pep pill –186 vs. benzedrine –60, simulated goofball –185 vs. pentobarbital –30, simulated alcohol –196 vs. alcohol –81, simulated marihuana –183 vs. pyrahexyl –71, and simulated cocaine –184 vs. LSD –51). This scale appears to reflect the more negative effects that subjects ascribe to drugs. It does not measure euphoria, as subjects attribute as much euphoria to drugs as is found in the actual drug conditions.

Scales derived from simulations possibly have promise for simplification of dimensions and the reduction of the number of scales needed to reveal subjective states. For instance, a scale for pleasantness (Condition 313) does not contain the physical symptoms found in the MBG Scale (#10). Cross-validation data are not available for these affective state scales. Simulation scales do not substitute for scales which show extensive differences between clinical groups. No simulation scale is equal to the Maladjustment Scale 127, for instance, for differentiating normals from psychiatric groupings.

SELECTION OF SCALES

The Carelessness Scale #0, a 39th scale, is recommended for routine scoring as a validity check.

The recommendation for routine scoring of 38 other scales is based on many step-wise discriminant function analyses (DFA) with BMD programs (Dixon, 1970). DFA was used to reduce the number of scales to explain differences between criterion groups and to reduce the number of criterion groups. Thus, scales have been eliminated which failed to contribute independent sources of differences between criterion groups. Criterion groups which are similar may be cautiously pooled to form one group or else one group representing several criterion groups may be used. DFA has also been used to classify individuals.

Preliminary DFAs were run on sets of 50 scales to reduce the total number of scales to 50 (50 is the maximum number of scales which

TABLE 3

CONDITIONS USED IN DISCRIMINANT FUNCTION ANALYSES

Condition Nos.	Conditions	N	Simulation Conditions: Project 1010	Mixed Categories: Project 1014	Actual Drugs: Project 1019	Clinical Groups: Project 1020
01 + 150	Placebo*	257		+		
20	Morphine*	147		+	+	
23 + 25	Nalorphine and Cyclazocine*	58		+	+	
26 + 27	Mentally Ill	198		+		+
28	Normal	219		+		+
30	Pentobarbital*	189		+		
30 + 31	Pentobarbital*	219			+	
40	Chlorpromazine*	139		+	+	
45 + 46	Scopolamine*	38		+		
51	LSD*	172		+	+	
60	Benzedrine*	209		+	+	
71	Pyrahexyl*	170		+		
81	Alcohol*	90		+	+	
85	Alcohol withdrawal	49		+		
86 + 87 + 88	Alcoholics - nonwithdrawal	148		+		+
94	Criminals	171		+		+
151 + 152 + 153	Chronic opiate*	27		+		
154 + 168	Weak & strong opiate withdrawal	73		+		
170	No-drug control for cond. 168*	58		+		
170 + 173	No-drug	189			+	+
177 + 178 + 179 + 180 + 181 + 182 + 208 + 244	Sim Opiate Effects*	138		+		
183	Sim marijuana*	50	+			
183 + 209	Simulated marijuana*	99		+		

TABLE 3 continued

Condition Nos.	Conditions	N	Simulation Conditions: Project 1010	Mixed Categories: Project 1014	Actual Drugs: Project 1019	Clinical Groups: Project 1020
184	Sim cocaine*	43	+	+		
185	Sim goofballs	36	+	+		
186	Sim pep pills*	32	+	+		
187	Sim LSD*	9	+			
189	Sim Chlorpromazine*	9	+			
192	Sim Miltown*	9	+			
192 + 195	Sim Miltown & Doriden*	16		+		
195	Sim Doriden*	7	+			
196	Sim Alcohol*	54	+			
196 + 222	Sim Alcohol*	103		+		
197	Sim day after on alcohol*	30	+	+		
198	Sim day after on opiate*	47	+			
199	Sim day after on pep pills*	23	+			
200	Sim day after on reefers*	24	+			
201	Sim day after on cocaine*	20	+			
202	Sim day after on goofballs*	23	+			
203	Sim alcohol withdrawal*	12	+			
203 + 204	Sim alcohol or goofball withdrawal	27		+		
204	Sim goofball withdrawal*	15	+			
205	Sim opiate withdrawal*	32	+			
205 + 208	Sim opiate withdrawal*	54		+		
206	Sim amphetamine withdrawal*	14	+			
207	Sim addict not on drugs*	49	+	+		

TABLE 3 continued

Condition Nos.	Conditions	N	Simulation Conditions: Project 1010	Mixed Categories: Project 1014	Actual Drugs: Project 1019	Clinical Groups: Project 1020
208	Sim opiate addict on opiate*	49	+			
209	Sim marijuana user on reefers*	49	+			
212	Sim disaster*	11	+	+		
213	Sim feeling at time family member died*	28	+	+		
214	Sim way feel on getting up*	30	+			
215	Sim party*	31	+	+		
216	Sim flu*	28	+	+		
222	Sim alcoholic on alcohol*	49	+			
223	Sim sex intercourse*	18	+	+		
224	Sim date with a woman*	16	+			
226	Sim miscellaneous drugs*	22	+			
227	Sim reefer come down*	16	+	+		
228	Sim cocaine come down*	19	+			
244	Sim opiate*	29	+			
247	Sim expect first supply of heroin*	21	+	+		
248	Sim feeling of loss of supply of opiate*	22	+			

* These conditions were obtained with opiate addicts. Note all conditions listed in the appendix were used in these projects, but conditions not listed above did not affect the analysis as these were not separate categories. For example, simulation of responses of mother (cond 302) or father (cond 303) were not used as categories.

DFA programs accommodate). Fifty scales were run on DFA of simulation conditions (project 1010), actual drug conditions (project 1019), clinical conditions (project 1020), and mixed categories, e.g., drugs, simulations, and clinical groups (1014). Table 3 gives the conditions and condition numbers used in these four projects. Some simulation conditions in project 1010 were so similar that they were combined in DFA in project 1014, but some were not. For example, withdrawal from goofballs (Condition 204) and alcohol (203) were essentially the same, so they were combined in DFA project 1014 of 36 diagnostic categories. Alcohol effects that occur in oneself (196) and that are believed by addicts to occur in alcoholics (222) were the same and were combined. The same is true for comparable marihuana conditions (183 and 209). Getting up in the morning was not pooled (214) with the day-after effects of reefers (200) and the view of other addicts who are not on drugs (207), although they are similar. Day-after effects of reefers (200), opiates (198), and cocaine (201) were not very distinctive; day-after effects of goofballs (202), alcohol (197), and pep pills (199) were somewhat more distinctive, but only day-after effects of alcohol (197) were retained in project 1014. The day-after effects of the last three drugs appeared to be intermediate between withdrawal and the natural feeling connected with getting up in the morning (214).

Some conditions were not combined for DFA in spite of their similarity in order to validate categories. No-drug conditions for addicts (00 and 91) could have been pooled with conditions 170 and 173 in the analysis of clinical conditions (project 1020). Low and high doses of actual drugs (project 1019) while similar were generally not combined because the most distinctive pattern for a drug is denoted by the high dose. An exception, pentobarbital (Conditions 30—200 mg), was made because not too many subjects (N=30) were tested at the highest dose of 250 mg (Condition 31). Some drugs were not included in the DFA of actual drugs in project 1019 as the doses were not high enough to produce a distinctive pattern. This was true of pyrahexyl (71). Placebo (01) is not different from no-drug (00). It is possible that scopolamine (45 + 46) is a category, but not enough subjects were available at the highest dose (46) to be certain of its distinctiveness. Some drug categories, though included, are not really as well defined as would be desired because of the low dose of the drugs used. Chlorpromazine (40) is less distinctive for this reason than desired. *Lack of comparability of dosage is a limiting factor in DFA of drugs.* DFA of simulations would appear to be less assailable on the factor of comparability of intensity of the state simulated.

The residual F ratios found in the four DFA analyses which were above 2.0 are presented in table 4 for 38 final recommended scales. The full names of 38 scales are presented in table 5. Table 4 also gives the uncorrected F ratios for the differences between 36 mixed categories in project 1014 (drug, clinical conditions, simulations). The difference between the uncorrected F ratio and the residual F in project 1014 gives an indication of the effect of corrections for scales made in DFA. The F ratios of most scales decreased markedly, some to nonsignificance, after correction, but a few increased. The F ratio for the Maladjustment (Mal #127) increased after correction for the Psychopath Scale (Pyp #102)

The utility of scales varied according to the set of criterion groups used. The General Drug Effect (GDE #125) was not important for distinguishing clinical groups, but it was for actual drugs (F = 56.51, project 1019).

The two scales which were clearly best for showing differences between clinical groups (project 1020) were the Psychopath (Pyp #102) and the Maladjustment Scales (Mal #127). The best two scales which most highly distinguished between actual drugs or simulation conditions were harder to define. Efficiency (Ef #87) appeared to be best in the simulation conditions, but the Narcotic Antagonist Scale #153 which is opposite Ef in many respects was better in drug conditions. The Narcotic Antagonist Scale #153, as well as the LSD Scale #21, also has something in common with Reactivity #101 and the Strong #207 and the Weak #191 Opiate Withdrawal Scales. In the overall comparison of mixed conditions (drug, clinical and simulation, project 1014), the Severe Opiate Withdrawal Scale (SOW #207) appeared to separate conditions better

TABLE 4

RESULTS OF DISCRIMINANT FUNCTION ANALYSIS

Scale No. & Abbreviation	36 conditions Uncorrected F *	36 conditions Project 1014 F Corrected	Simulations Project 1010 F Corrected	Clinical Groups Project 1020 F Corrected	Drugs Project 1019 F Corrected
101 Re	36.13				
2 GDP	12.11				5.39
102 Pyp	83.14	83.14		328.91	3.02
10 MBG	30.82			9.57	
108 SoW	26.64	2.76		5.35	5.19
111 Con	53.20	20.46	2.01	86.51	
127 Mal	34.18	50.53	2.21	218.86	3.92
125 GDE	54.26	60.21			56.51
123 Tir	29.94			2.30	5.32
29 Imp	8.47	5.47		5.22	
143 Int	10.04	10.78		15.17	
115 Taste	17.18		3.02		2.73
4 PCAG	35.84		3.73	4.90	4.38
7 AG	25.43	9.83		6.87	29.91
11 MG	14.93				3.50
12 BG	29.32		2.58	6.34	16.59
17 CS	39.08				40.75
19 Ex	39.32	31.01	10.95	4.59	5.89
21 LSD	44.48	10.81			99.85
47 IT	34.05			2.77	2.35
48 IF	17.28	2.48		3.25	
52 Mar	11.00	4.12		2.31	2.07
55 AWS	36.43		5.11		
87 EF	40.22		22.45		11.06
106 Pop	58.53			55.56	
112 Cr	4.20			6.64	11.04
122 Weak	32.82	7.29	2.58		3.18
129 Dr	44.72	19.39	13.89	2.80	7.29
136 Com	37.11	12.25		29.82	
145 Proj	27.99	21.03		114.34	
153 NAnt	41.56				76.03
161 ChrO	35.94		2.58	2.82	
163 Sim MS	37.43	40.76	6.77		
191 WOW	39.72			37.39	2.43
199 WOWs	39.85	5.27	2.04		3.13
207 SOW	49.01	49.48			
220 AW	8.51	16.83			6.96
223 Hum	19.34	4.87		2.87	3.56

* The uncorrected F ratio is based on 35/3159 d.f. in project 1014 for 36 conditions. The F ratio under the corrected column refer to F ratios after correction.

TABLE 5

LIST OF 38 RECOMMENDED SCALES

No.	Abbr.	Full Name	Mean Total	Standard Deviation Within Groups
101	Re	Reactivity #2	34.96	22.14
2	GDP	General Drug Predictor	15.48	7.623
102	Pyp	Psychopath #2	37.79	6.568
10	MBG	Morphine-Benzedrine GV	19.27	7.363
108	SoW	Social Withdrawal	15.54	5.611
111	Con	Self-Control	31.94	4.371
127	Mal	Maladjustment #2	34.83	5.243
125	GDE	General Drug Effect #3	16.11	4.904
123	Tir	Tired	7.156	2.457
29	Imp	Impulsive Factor Analytic	25.50	5.458
143	Int	Interests	16.21	4.732
115	Taste	Taste	1.238	1.798
4	PCAG	Pent, CPZ, Alc GV	12.77	5.813
7	AG	Alcohol GV	5.213	2.049
11	MG	Morphine GV	13.90	4.968
12	BG	Benzedrine GV	21.33	5.522
17	GS	Chlorpromazine Specific	17.43	3.901
19	Ex	Excitement GV	11.77	3.875
21	LSD	LSD Drug Correction	10.97	3.397
47	IT	Infrequent True	11.02	9.190
48	IF	Infrequent False	6.422	3.202
52	Mar	Marijuana	15.17	2.584
55	AWS	Alcohol Withdrawal Specific	31.72	16.62
87	Ef	Efficiency #3	29.92	8.967
106	Pop	Popularity	28.19	7.534
112	Cr	Critical	36.21	6.639
122	Weak	Weak	14.99	3.954
129	Dr	Drunk	6.081	2.398
136	Com	Competitive	39.97	5.165
145	Proj	Projection	20.46	5.627
153	NAnt	Narcotic Antagonist	18.33	7.961
161	ChrO	Chronic Opiate	6.868	3.038
163	SimO	Simulated Opiate	11.73	7.506
191	WOW	Weak Opiate Withdrawal	27.15	8.037
199	WOWs	Most Significant WOW	18.16	3.149
207	SOW	Severe Opiate Withdrawal	17.86	10.13
220	AW	Alcohol Withdrawal greater than SOW	59.21	7.506
223	Hum	Sense of Humor	17.93	4.051

GV means Group Variability; Pent means Pentobarbital; Alc means Alcohol; CPZ means chlorpromazine. The mean for the total is based on the average from sums for conditions for mentally ill (26,27), normal (28), alcoholic (86,87,88), criminal (94), and opiate addicts (170,173). The standard deviation within groups is based on the within conditions variance of the above conditions.

than either the Narcotic Antagonist or LSD scales. For this reason it was thought that SOW #207, as the estimate of stress and reactivity, could be considered the second most overall useful scale for showing subjective changes.

In order to provide the user of the ARCI some of the power afforded by the DFA analyses, it was decided to do a DFA analysis correcting for only four scales (Mal –127, Pyp –102, SOW –207, Ef –87) described above. Analyses can be carried out on a desk calculator with time using corrections of four scales. The order of correction is important. While several analyses indicated that the Psychopath Scale –102 was most important to correct first, logically it seemed better to correct for Maladjustment –127 first over the psychopath dimension because maladjustment represents a more general type of factor. It seemed important to correct for both Maladjustment and Psychopathic Scales before the scales measuring subjective effects because the subjective effects of drugs and simulations were determined in opiate addicts. By correcting for Maladjustment and Psychopath Scales first and second, it becomes theoretically possible for the patterns defined by drugs and other subjective states to be potentially useful as standards for comparisons in other groups. This hypothesis needs further testing. It seemed logical to correct for Severe Opiate Withdrawal (SOW #207) as the third scale as items on the ARCI predominantly are correlated with a reactivity factor (Haertzen 1965*b*, 1966*a*). The SOW scale is an estimate of stress and reactivity. Any random factor analysis of items will yield a first factor that will be correlated with the Reactivity (#101) or Severe Opiate Withdrawal Scales (SOW #207) or Alcohol Withdrawal (AWS #55). The reactivity or stress dimension accounts for more variance on items than either the psychopath or maladjustment dimensions. Efficiency is the second most important individual difference dimension for items on the ARCI (Haertzen 1965*b*).

The actual procedure for correcting scores on 38 ARCI scales for these four scales is shown under corrected scales (pp. 32-36).

While all the 38 scales could have been used in a discriminant function methodology for comparing any subject or group with any standard set of comparison conditions, in a practical sense this is not necessary. Thus, whereas the F ratio for each added scale may be significant after corrections, the added scale does not necessarily lead to a greater accuracy in predicting from which group a given subject or sample was drawn.

It was decided here to provide the methodology for making two types of comparisons. The most generally useful comparison could be with the clinical groups used in project 1020. The methodology to be described (see pp. 33-37) for example, would permit an answer to the question of whether a subject is most similar to an opiate addict (170 + 173), criminal (94), alcoholic (86, 87, 88), mentally ill (26 + 27), or normal subject (28), the types available so far. The typical examiner is also interested in whether a subject is faking bad. A comparison with the profile for simulation of mental illness (Condition 307) seemed most relevant for this purpose. Measurement of faking good is also important. Those interested in this comparison might also include ideal self (Condition #301), but ideal self will not add much to categorization, as ideal self, at least for opiate addicts, is not highly different from their usual self.

Those interested in making a comparison with faking good or bad should adjust the profiles according to the type of sample that is being dealt with as the profiles for the ones presented reflect the elevated psychopathic characteristic of addicts. The fake profile in T-score form for a specified group equals the T-score of the specified group for standard administration plus the T-score for addicts under the fake simulation minus the T-score for addicts for the standard administration (170 + 173).

The second type of comparison which focuses on the unique feature of the ARCI is its sensitivity to drug and extraordinary states. The states having some degree of distinctiveness include: no-drug (00 + 91), morphine (20), narcotic antagonists (cyclazocine and nalorphine, 23 + 25), chlorpromazine (40), LSD (51), benzedrine (60), alcohol (81), and pentobarbital (31). These drugs were used in DFA project 1019 described before and provide a frame of reference for examining the quality of subjective experience. Chronic opiate effects (151 + 152 + 153) and withdrawal (154 + 168) were also included. Withdrawal especially defines subjective states marked by sickness, tension, stress, reactivity, and restlessness. Comparisons of subjects can be made with these drug conditions whether they are on or off drugs. The similarity of all groups available to the author with these standard conditions by the DFA is presented in appendix table 4.

The user of the ARCI may possibly wish to compare tests with additional groups with which he has to deal, such as neurotics. Those working with alcoholics may wish to include the condition for alcohol withdrawal (85) for comparison along with the drug conditions mentioned above. Alcohol withdrawal is most similar to opiate withdrawal of the 10 so called drug conditions. The possibility of using drug conditions and clinical groups for classification standards has been discussed. Other potential standards for classification include simulations which have been investigated. These are:

A. Affects: about to do something dangerous (318), afraid (322), anger (316), bored (321), danger (317), depression (311), excitement (312), nervous (314), pleasant (313), and tired (315).

B. Acute simulated drug effects: alcohol (196), chlorpromazine (189), cocaine (184), Doriden (195), goofball (185), LSD (187), Miltown (192), no-drug (174), opiate (244), pep pill (186), and reefer (183).

C. Day-after simulated effects of drugs: alcohol (197), cocaine (201), goofball (202), opiate (198), pep pill (199), and reefer (200).

D. Withdrawal or come-down simulated effects of drugs: alcohol (203), cocaine (228), goofballs (204), opiate (205), pep pills (206), and reefer (227).

E. Self-concept and special state simulations: self before starting to use drugs (304), date with a woman (224), death in the family (213), disaster (212), flu (216), get up in the morning (214), hunger (210), ideal self (301), no-drug (174), party (215), sex (223), thirst (211).

F. Simulations of other types of persons: alcoholic not under alcohol (308), average man (309), criminal (310), father (303), mentally ill (307), mother (302), and opiate addict under no-drug (207). A subcategory could include: alcoholic under alcohol (222), opiate addict under an opiate (208), and reefer user under reefer (209).

G. Simulations of opiate related experiences: before starting to use drugs (304), no-drug (174), expecting first supply of heroin (247), acute effect of opiate (244), day-after effect of opiate (198), loss of supply of heroin (248), chronic effect of opiate (132), and opiate withdrawal (205). Acute and chronic effects of opiates cannot be differentiated. Loss of the supply of heroin and opiate withdrawal are also similar to each other. Consequently, the number of opiate-related experiences is overstated.

The subtypes listed above give some indication of the possible simulations which are presently available for standards in classification. Subtype A is the most potentially useful for classification purposes since effects are relevant to the understanding of the status of subjects whether they are on or off drugs. On the other hand the conditions under opiate-related experiences (type G) would appear to be only of interest to those studying addiction. Application of this type would increase the use of addiction-related metaphorical language. An example of such a metaphor would be, he is as sick as a person kicking an opiate habit, or simply, he is kicking a habit. Such metaphores may be difficult to accept and apply by professionals who deal with subjects who never have used drugs at all. Many addiction-related terms such as "kick a habit" are used to express relations having nothing to do with drugs. Interpretation of individual scales requires a conceptualization of the scales beyond the name indicated. MBG, for instance, must be thought of in terms of euphoria and efficiency of functioning and not just the effect of morphine and benzedrine.

In designing simulations, their value for classification was thought of mainly in terms of substitutes for actual withdrawal states as it is difficult to conduct actual withdrawal experiments. The main purposes of simulations were to aid in classification of withdrawal (type D), validate the simulation method by determining the similarity of actual drug and withdrawal effects and comparable simulated effects, validate the attributed construct validity of some scales by determining whether simulations such as pleasantness would be associated with an elevation on the MBG Scale determine the similarity of affective states (type A) and simulated effects of drugs (type C) and simulated situational effects (type E), determine the extent of role taking behavior (type E and F) and the relation of these roles to responses of clinical groups.

In the case of affects it was thought that there would be some degree of similarity between afraid (322) or nervous (314) and LSD effects (51); excitement (312) and amphetamine (60), LSD (51), or morphine effects (20); boredom (321), depression (311), and tiredness (315), and the effects of chlorpromazine (40); nervous (314), depression (311), and tiredness (315), and the effects of opiate withdrawal (154 + 168).

One assumption in the use of simulations for classification standards is that different groups respond in the same way. This assumption may not be upheld and should be checked as psychopaths are thought of as being defective in role-taking behavior. For instance, when opiate addicts gave simulations of their parent's responses (302 or 303), they presented a profile that was similar to the one found for mentally ill (26 + 27). It is not known how other classes of subjects rate their parents, but it seems unlikely that normals, at least, would ascribe the characteristics of mental illness. It is of interest to note that parents were *not* viewed as being like addicts. Perhaps the most interesting outcome of the classification of subjects in different conditions to the 36 categories in project 1014 was the similarity of simulations of parents to those in the mentally ill category. This similarity is quite interesting as simulations of ideal self, the average man on the street, alcoholic, and criminal do not fall in the mentally ill category.

The issue which will concern the user of the test is whether averages for a population tested or the instruction used are so different from the ones given in appendix table 3 as to demand a new category. In general it would appear that new categories are justified when the group in question is quite different from those used in the drug and clinical group comparison sets (see tables 9 and 11). This circumstance will be indicated when the sum of differences squared over scales (see section on "t" tests, pp. 33-37 with each of the comparison groups exceed those presented in appendix table 4 and table 12). The importance of the sum of differences squared is relative and depends on the number of scales in the subset which is used. Twenty-four scales have been used in the drug set and only 10 have been used for the clinical set. The differences squared (criterion used for DFA classification) are naturally greater when 24 scales are used rather than 10. On the other hand, the lower the sum of squares of differences between a large sample and any condition in the comparison set, the more likely it is that the condition in question and one of the comparison conditions come from the same population. In this regard placebo (conditions 001 + 150) was not selected as a category because it is so similar to the no-drug condition in opiate addicts. The sum of differences squared was only 2 (see condition 001 + 150, table 12 and appendix table 4).

STANDARDIZATION

All published scales have been standardized on opiate addicts (Hill et al. 1963*a*; Haertzen 1965*a*, 1965*b*, 1966*b*; Sharp et al. 1967; Haertzen and Panton 1967). This standardization involved normalizing distributions for a no-drug and placebo condition for opiate addicts (Conditions 00 and 01). The T-scores (mean of 50 and SD of 10) derived thereby were quite useful as this transformation generally equated the SDs obtained in the no-drug condition and drug conditions. On all empirical drug scales the variance of naturally occurring raw scores were much greater for drug conditions (sometimes 2 or 3 times higher) than the no-drug condition. The differences tended to be much less on the group variability and drug correction scales as well as on the factor analytic scales, with the exception of the Reactivity scale (#1, most like the empirical drug scales). This standardization is useful for making distributions for drug and nondrug conditions similar.

The main problem with the standardization on addicts is that it is a highly specialized population; interpreting profiles in this frame of reference may appear difficult. The usual standardization of tests is based on normal Ss. This form of standardization is generally suitable as it does permit the user to consider his results with respect to the most universally available reference group. To permit comparison with this universal standard, the user may wish to use a profile sheet which gives the average for normal Ss. This type of profile sheet is shown in figure 1. Profile sheets can be prepared from figure 2 which gives the average for any particular reference group.*

The defect of a standardization on normal subjects or any particular group or condition is that the variance estimate may not be optimal for varied uses. Estimates of variability from different populations would reduce this defect. Another feature of the use of normal Ss is that the standardization on this group by definition makes the group the same on all scales. This means that the profile for normals would be flat or not at all distinctive as contrasted with the irregular profile shown in figure 1. This prohibits evaluation of profiles of normals purely on the relative profile elevations, since the parent profile is flat. The flatness would not affect an evaluation of profile similarity based on discriminant function analysis, since similarity is estimated with differences squared.

To enable the user to distinguish normal subjects and other diagnostic groups on the basis of their profiles, standardization was based on five diagnostic groups: the no-drug condition in opiate addicts (170, 173), alcoholics under no-drug (86, 87, 88), criminals (94), normals (28), and mentally ill (26 and 27) used in project 1020 (see table 3).

Using these five groups an overall sum of within groups sums of squares was determined. The standard deviation was calculated with the within groups sums of squares. The formula used for calculating T-scores was

$$50 + \frac{(X_{ik} - \overline{X}_{tot\ k})\,10}{SD_{wi\ k}}$$

This formula is described and fully illustrated under obtaining T-scores (see p. 30). The total mean and SD within groups for each scale are given in table 5. According to the above formula the standardization mean is 50 and the standard deviation is 10 when the scores have not been corrected for Maladjustment, Psychopath, Severity of Opiate Withdrawal, and Efficiency. The uncorrected T-scores for each group are reported in table 2 of the appendix.

The transformation for corrected T-scores is described under Corrected T-scores (see pages 32-36). The Corrected T-score transformation is used for making comparisons of groups by Discriminant Function Analysis. The theoretical mean for five standardization groups is also 50 on corrected T-scores; however, the standard deviation is generally less than 10 because it is a residual SD remaining after correction for Mal –127, Pyp –102, SOW –207, and Ef –87. In addition, the SD reflects an adjustment that is based on within-conditions variability within 36 conditions used in project 1014 (see table 8). As pointed out above, one of the problems associated with a standardization on normal Ss is that this group does not adequately reflect the SD that can be obtained with other groups or conditions. This also applies to a lesser extent when clinical groups are used. To make a further adjustment for the sizeable differences between the SD for the clinical groups on some scales as compared with some subjective states, the corrected SD reflects the SD found in 36 conditions in project 1014 (see table 8). This adjustment makes the SD on scales such as for General Drug Effect (#125) and Taste (#115) larger. The within SDs for 36 conditions are given in table 8 and may be more properly examined after study of the section on corrected T-scores (pp. 32-33).

INSTRUCTIONS

The standard and simulation forms of the ARCI are self-administering through the use of instructions at the beginning of the test booklet. The test can be given to groups or to individuals. In groups Ss are allowed to make occasional minor remarks to each other, but they are not allowed to talk or make noise continuously. Subjects are advised to answer all questions and to be careful in making sure that the number of the question agrees with the number on the answer sheet. If a subject leaves a question blank, he should be encouraged to give a response or to force a response. If a subject objects after having tried to respond, a nonresponse is accepted. His missing responses can be randomly made from responses given by other subjects in the same study and condition; a response from a different subject is used for each missing response. The examiner may define individual words, but he should try not to suggest any answers. That is, the nondirective method should be used in dealing with the subject's questions which deal with the way in which items should be answered. Ss should be encouraged to obtain help from the examiner and not from his friends. When a S expresses concern over his speed in answering questions, he is told that people differ in the amount of time they spend in thinking about the meaning of items, that he should go at his own pace, that detailed thought is not expected, and that first impressions form the basis of a satisfactory response. Double marks may indicate carelessness. Double marks may be made by Ss with the thought that the double mark means a neutral or inbetween response. He should be told to force a response one way or the other. An experienced test taker who makes double marks should be asked to take the test over as the double marks indicate carelessness. A number of methods are used in dealing with careless Ss. These methods are presented under scoring.

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*For the convenience of the user, one copy each of Figs. 1 and 2 have been included at the end of this book and may be easily removed for use. Additional copies of the forms may be requested from C. A. Haertzen, Ph.D., Addicition Research Center, P.O. Box 2000, Lexington, Kentucky 40507.

Ss ordinarily complete the ARCI without assistance in 45 minutes to 2 hours. Upon retesting, most Ss finish the test in 45 minutes to 1 hour without assistance. However, under some drugs, a S's cooperativeness, coordination, alertness, or vision may be so impaired that he needs someone to read the questions and record his responses. The examiner should read questions in an even tone of voice so as not to suggest the examiner's personal reactions or answers. The examiner should express no surprise at answers nor should he ask additional questions based on a S's unexpected answers. If a S is about to fall asleep, he may be stimulated to wake up by conversation or by having him stand up and walk around. Ss during opiate withdrawal may refuse to take tests because of their uncooperative frame of mind. Refusals which arise from too many tests to take may be prevented by giving only one test on a given day. An uncooperative S may be willing to answer questions presented verbally when he is seen on an individual basis; more rapport can be built up if a S is seen alone. One disgruntled individual can evoke similar tendencies in other Ss.

Aside from instructions, the order of testing is a potential determinant of responses. In opiate addicts no placebo effect was evident when the order of testing was controlled. However, in addicts drug-related responses were more marked when a placebo was administered before rather than after a potent drug, or conversely drug-related responses were diminished when a placebo was given after a potent drug (Haertzen 1969*a*). In a study of contrast effects, opiate withdrawal symptoms were greater in opiate addicts when they simulated opiate withdrawal effects after they simulated no-drug effects. On the other hand addicts felt more efficient and less troubled by opiate withdrawal systoms when they simulated a no-drug experience after they had simulated the withdrawal experience (Haertzen and Hooks 1971). When Ss are monitored and awarded for tests that show consistency, carlessness scores decrease irrespective of the simulation instruction.

Simulated Instructions

The simulated form can be prepared from the standard form by deleting references to "today" in the instructions placed at the beginning of the booklet and after every 100th question. The altered beginning instruction is preceded by one which specifically refers to a self-simulation. An example for the effects of reefers or marihuana (instruction #183) is given below:

Master Instruction 183

THE ARC INVENTORY

This inventory consists of numbered questions. Read each question carefully and decide whether it is true or false as applied to the way you would typically feel while *on the street after you have had some reefers or marihuana.*

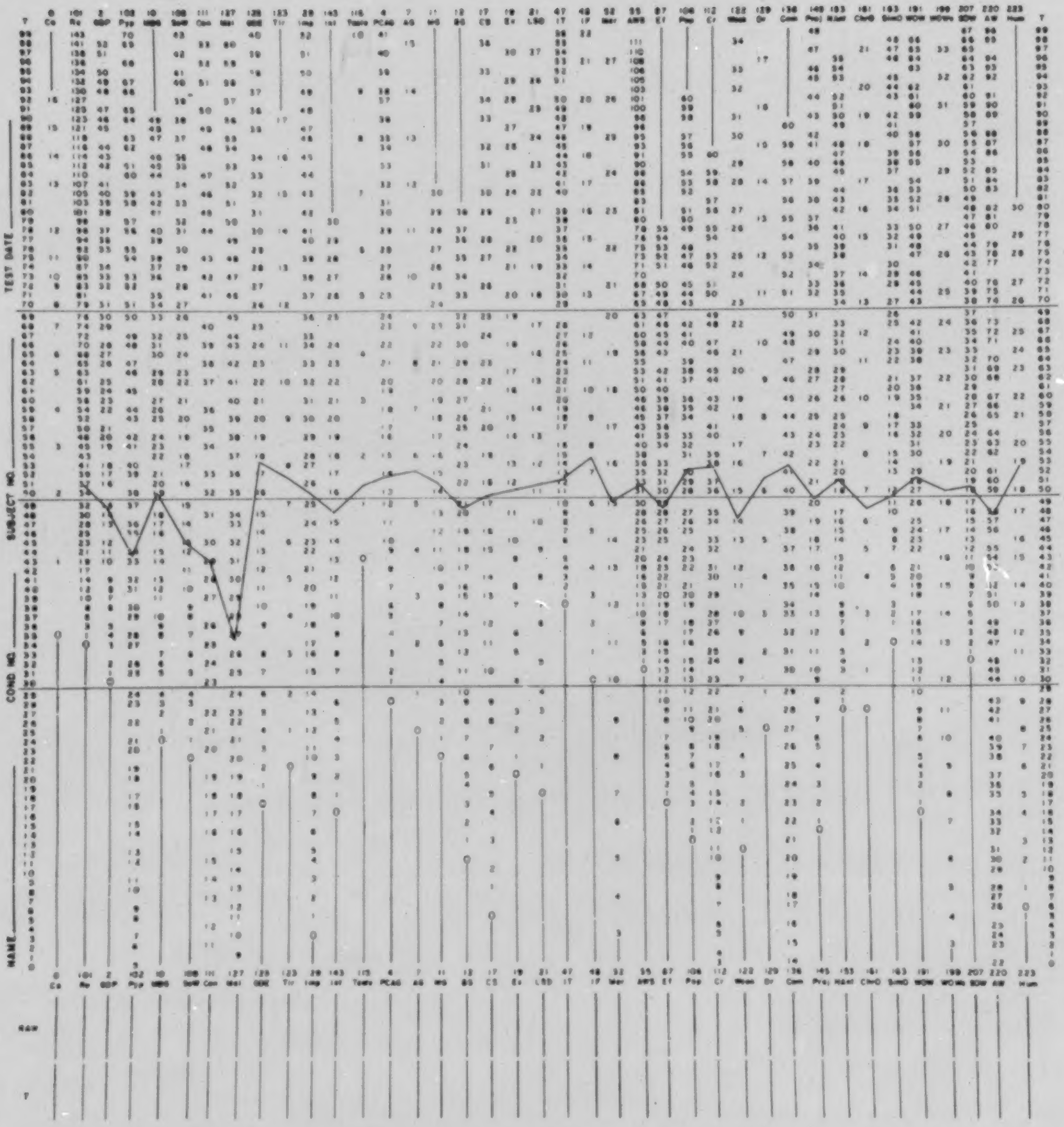


Fig. 1. T-score profile sheet with mean scores for normals (condition 28). The figure shows the raw scores for each scale which corresponds to a T-score for the standardization sample. The broken line gives the average T-score for normal subjects. See figure 2 for further explanations of the T-score transformation.

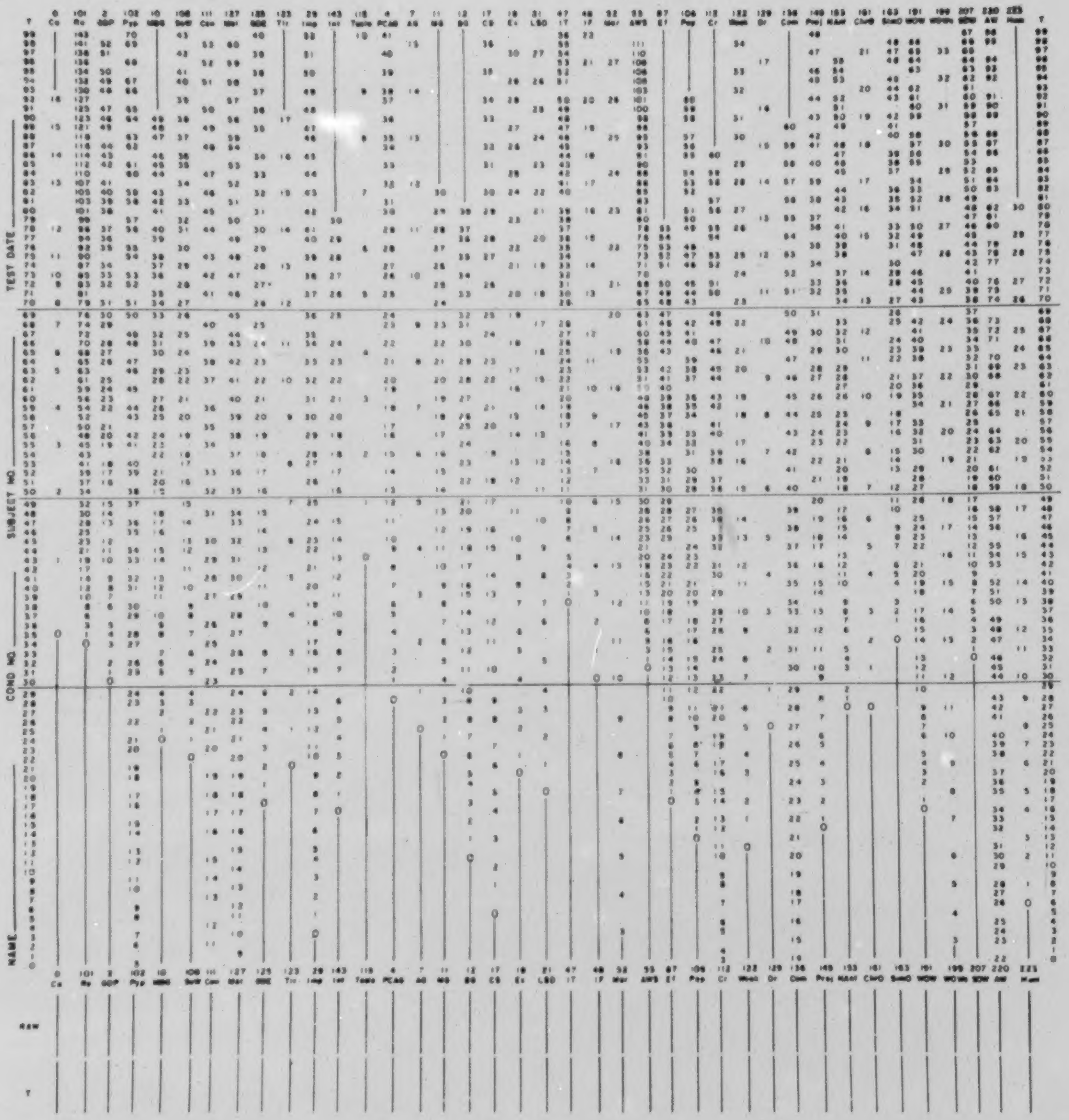


Fig. 2. T-score profile sheet for transformation of ARCI scales. The T-scores were derived from the means and standard deviations given in table 7 for standardization samples comprised of mentally ill, normals, alcoholics, criminals and opiate addicts. To obtain the T-score which corresponds to a specific raw score for a scale draw an imaginary horizontal line from the raw score to the T-score on the right or left margin. For example, a raw score of 1 on the Re scale 101 corresponds to a T-score of 35. A raw score of 4 on GDP is equivalent to a T-score of 35. Thus, a raw score of 1 on Re is equivalent to a raw score of 4 on GDP.

This instruction should apply to those questions that refer to feelings, experiences, and attitudes. Questions that refer to your specific past history that cannot be changed should be answered in accordance with your past actual history. For example, a question on whether you finished high school would be answered the same whether you are sick or healthy, on the street, or in a hospital.

Remember, answer questions according to the way you would feel while *on the street after you have had some reefers or marihuana.*

The altered standard instruction, given below, is placed after the self-simulation instruction.

THE ARC INVENTORY

Mark your answer sheet in the same way as shown here. If the statement is TRUE or MOSTLY TRUE as applied to you, blacken between the lines in the column headed "T" (see A at right). If the statement is FALSE or MOSTLY *NOT* TRUE, blacken between the lines in the column headed "F" (see B at right).

Remember to give YOUR OWN opinion of yourself. DO NOT LEAVE ANY BLANK SPACES. In marking your answers be sure that the number of the statement is the same as the number on the answer sheet. Make your marks heavy and black with the special pencil provided.

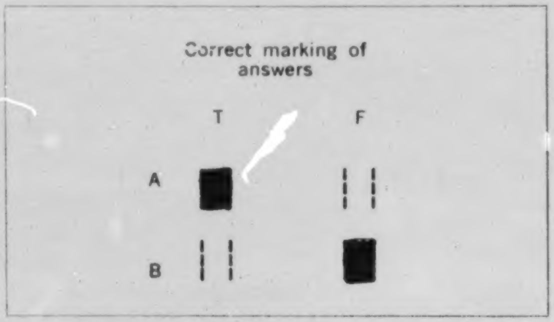
When simulation instructions are given it is emphasized that he has a special instruction to follow. A subject may be asked about the experience he is simulating to determine whether he has the proper instructional set, especially on the first occasion when he is given such instructions. Simulations referring to one's self have been given only to Ss who have had the experience. Such experiences are assessed by a Drug History Questionnaire which asks about various experiences such as the days of use of specific drugs.

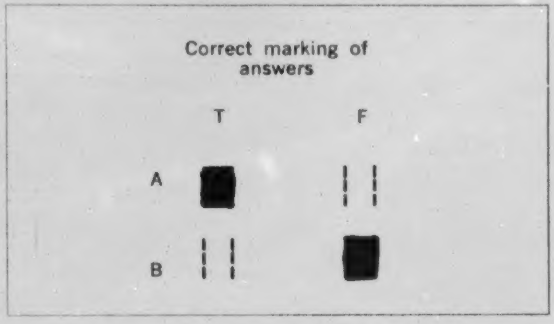
Simulations referring to other Ss are about the same as self-simulation instructions. Such instructions have been given to Ss whether they have had the experience with the drug or not. As pointed out in scoring, Ss will have a difficult time simulating responses of persons whose experiences may be relatively unknown by them. Only one instruction is given for simulations of other people as illustrated by the one shown below for reefer user (instruction #209):

Master Instruction 209

THE ARC INVENTORY

This inventory consists of numbered questions. Read each question carefully and decide whether it is true or false as applied to the way an *AVERAGE MARIHUANA USER* WOULD ANSWER THE QUESTIONS ON THE STREET after he has had a few *REEFERS.*





Mark your answer sheet in the same way as shown here. If the statement is TRUE or MOSTLY TRUE as applied to the AVERAGE MARIHUANA USER, blacken between the lines in the column headed "T" (see A at right). If the statement is FALSE or MOSTLY *NOT* TRUE, blacken between the lines in the column headed "F" (see B at right).

Remember to give your own opinion. DO NOT LEAVE ANY BLANK SPACES. In marking your answers be sure that the number of the statement is the same as the number on the answer sheet. Make your marks heavy and black with the special pencil provided.

Remember, answer every question according to the way an *AVERAGE MARIHUANA USER WOULD ANSWER THE QUESTIONS ON THE STREET AFTER HE HAS HAD A FEW REEFERS.*

Desirability Instructions

Two other types of instructions have been used with a shortened version of the ARCI (see p. 2) that have been referred to as List 22. Both of these instructions require a five-place answer sheet. Instruction 401 requires a desirability rating of drug effects that occur in narcotic addicts. There are other instructions in this series such as rating of experience in a general sense (instruction #400).

Master Instruction 401

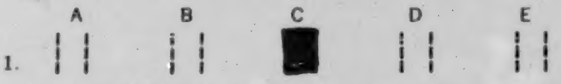
This questionnaire has been designed for research purposes only. You do not need to sign your name. On the answer sheet fill in the spaces for date, school (or place of work or institution), date of birth, age, and sex.

Below you will find a list of items referring to *experiences which some narcotic addicts have had while under the influence of drugs they have taken.* You are to judge how good or bad these experiences are from your personal point of view using the rating scale given below:

A = very good experience
B = good experience
C = average experience, it is neither good nor bad
D = bad experience
E = very bad experience

The first item is: I am sweating more than usual.

An example answer to item one is given below:



If you think that sweating is a very good experience, place a heavy black mark beside the item under the column headed A. If you think it is a very bad experience, place a mark under column E. If you think that the experience lies somewhere in between these extremes, place your mark in accordance with your thinking. In the example given here, a mark has been placed under C. This neutral response is only an example. Each person will have a different idea about sweating and the other experiences which follow.

Rate these items in the way that you think. Make your marks heavy and black and do not leave any stray marks on the answer sheet as these may cause the electronic scoring equipment to score the questionnaire incorrectly. Erase mistaken answers completely. Try to rate every item. Use a pencil if you have one.

Do not discuss your instructions or answers with others while you are taking the test. Other individuals may be given a different set of instruction.

Presentation of results using desirability instructions are beyond the scope of this review. Opiate addicts tend to rate drug-related subjective experiences more favorably than normals. This is true whether the experiences purportedly relate to drugs in narcotic addicts (instruction #401), general experiences of people (instruction #400) or drug experiences in students (instruction #407).

Drug Association Instructions

A drug association instruction (B-1, master instruction 1) has been applied to list 22 (Haertzen and Hooks 1973). The instruction is adaptable. Many different drugs such as morphine (instruction B-1-4, master instruction 4) and methadone (instruction B-1-3, master instruction 3) have been substituted for heroin in instruction B-1.

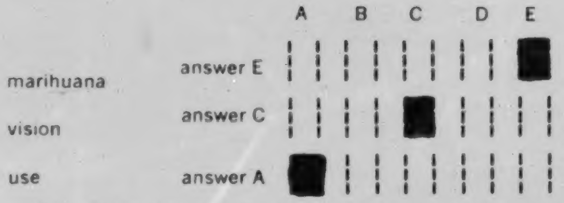
DA Instructions B-1

Below you will find a list of 280 words or sentences. You are to indicate the drug which you associate with each word. The answer sheet gives room for five possible choices. They are for:

A. heroin
B. benzedrine
C. alcohol
D. goofballs
E. reefers

If a word reminds you of something connected with goofballs, you would put a black mark under D for the item number which goes with the word. If a word reminds you of heroin you would put the mark under A.

Examples:



Do not put a mark down for more than one drug for any word. Each person has his own associations for drugs. Give associations to all words even if the words do not appear to make sense.

Make no marks on the sheet with the list of words. Mark only on the special answer sheet. Do not put any stray pencil marks on the answer sheet. Make your marks heavy and black.

Discussion of drug associations is also beyond the scope of this review. Associations are more affected by the past reinforcement history of a subject (Haertzen and Hooks 1973) and are not simple responses like simulated experiences. Opiate addicts give many responses to heroin, their drug of addiction; in contrast, they give few responses to benzedrine or to goofballs even when there would appear to be a basis for responses to these drugs as indicated by the occurrence of a subjective drug effect as judged from studies of simulated effects.

SCORING

All scales with the exception of the carelessness scale-O can be readily scored by hand or machine. In obtaining raw scores for each scale, each response is given one point if the response agrees with the direction of scoring on the key that is presented in appendix table 1. The carelessness scale-O (Haertzen and Hill 1963) can be scored with the aid of a specially devised scoring sheet presented in table 6. Carlessness is checked by comparing responses on questions that are repeated exactly or in logically opposite form. The first column gives 23 item numbers and the suggested direction of scoring for each item. The second column gives the numbers for items which correspond to those given in column 1. Thus, 252T (second column) corresponds to 24T (first column); 542F (second column) corresponds to 37F (first column); but note that 291F corresponds to 83T. That is, item 291 is stated in logically opposite form of that for item 83. If a subject answered question 24T (column one), a mark would be placed on 24. If he answered it false, no mark would be put on 24 of the scoring sheet. If a subject answered item 252 (column 2) "true" a mark should be put on item 24; if a subject answers item 24 and 252 "true" two marks would be placed on item 24 of column 1. If both items were answered "false" no mark would be put on 24; this also means that the subject answered the questions consistently. If the subject answered question 24 true and 252 false, he would be inconsistent. The score on the carelessness scale is equal to the number of inconsistent responses. In columns 3 to 10 of table 6, only the numbers listed in column 1 are given without the scoring designation. The scoring directions are not indicated in columns 3 to 10 because it is assumed that the scoring template will be used. Each column can be used to score a separate answer sheet.

A special scoring template should be devised to score Ca. The scoring template should contain only those numbers that are given in column 1 of table 6. Thus, where item 24 falls on the true-false answer sheet only item 24 is punched under true; its paired item 252 is also punched under true and the item number 24 is placed beside 252 to indicate the item which is paired with it. Twenty-four is listed on the template to indicate the place to be marked on the scoring sheet in table 6. The key with scoring directions was devised to reduce clerical work. On populations that answer some questions differently from addicts, clerical work can be reduced by scoring some items in a different way. For example, item 310, "I have been in trouble with the law" is keyed "false", because a "true" response is very frequent (over 90 percent) in opiate addicts. However, in some nonaddict populations a "true" response would be infrequent, so item 310 could be scored "true" and 343 could be scored "false." Alteration in the scoring template can be made as scoring refers to consistency. Perfect consistency is shown by no mark on a given item in table 6 or two marks.

After Ca has been scored it can be converted to a T-score using the last two columns of

TABLE 6

SCORING SHEET FOR CARELESSNESS SCALE

1	2	3	4	5	6	7	8	9	10
24T	252T	24	24	24	24	24	24	24	24
37F	542F	37	37	37	37	37	37	37	37
83T	291F	83	83	83	83	83	83	83	83
112T	448T	112	112	112	112	112	112	112	112
118F	518F	118	118	118	118	118	118	118	118
124F	379T	124	124	124	124	124	124	124	124
126F	226T	126	126	126	126	126	126	126	126
133F	393F	133	133	133	133	133	133	133	133
161T	454F	161	161	161	161	161	161	161	161
178F	423T	178	178	178	178	178	178	178	178
181T	486F	181	181	181	181	181	181	181	181
191F	451F	191	191	191	191	191	191	191	191
203T	349T	203	203	203	203	203	203	203	203
208T	547T	208	208	208	208	208	208	208	208
220F	390T	220	220	220	220	220	220	220	220
223T	363T	223	223	223	223	223	223	223	223
232F	370F	232	232	232	232	232	232	232	232
245F	543T	245	245	245	245	245	245	245	245
259F	507F	259	259	259	259	259	259	259	259
273T	468T	273	273	273	273	273	273	273	273
308T	332T	308	308	308	308	308	308	308	308
310F	343T	310	310	310	310	310	310	310	310
319T	396T	319	319	319	319	319	319	319	319

T-SCORE OF Ca

RAW	T
0	35
1	43
2	50
3	55
4	59
5	63
6	65
7	68
8	70
9	72
10	73
11	75
12	78
13	83
14	86
15	89
16	92

table 6 or from a profile sheet in figure 2. These normalized T-scores were determined with 504 tests for placebo (condition 01) and no-drug (condition 00) (Haertzen and Hill 1963). A raw score of 0 is equivalent to a T-score of 35, and a raw score of 16 is equivalent to a T-score of 92. Tests with T-scores of 70 or greater are regarded as invalid. Invalidity may be due to carelessness, confusion, inability to follow the directions, illiteracy, and difficulty of the test-taking instructions in the case of simulation tests. Carlessness may also be indicated when a S leaves columns of answers blank, answers more questions than have been asked, double marks, finishes the test too quickly (under ½-hour is suspect in most instances). If it is determined that the S was careless, the S can be asked to take the test over. Depending on the S, he may be told directly that there was some indication that he failed to keep the number of the question in agreement with the number on the answer sheet. The examiner may quickly demonstrate inconsistency to the subject especially by verbally obtaining his consistency on a few questions from the scale for infrequent true responses (scale 47) or infrequent false responses (scale 48), which were answered in the infrequent direction. Sometimes it is necessary to give a vocabulary test to determine whether carlessness is due to reading disability. A subject may have considerable difficulty in taking the test if his vocabulary is below the sixth grade level.

It is important to score the Ca scale on the first testing as well as on subsequent tests. A subject who is conscientious on the first testing may subsequently give all invalid tests if he is not informed of indications of carelessness. The careless S is not always detected as not all of the questions in the Ca scale are logical opposites. An occasional S who takes a true or false response set will obtain a score within acceptable limits. The scales for infrequent true and false responses can be of some service in detecting such individuals. The infrequent false scale would appear to be better for this purpose as it is not as affected by the immediate status of the subject as the infrequent true scale. The true response set (#47, infrequent true) is correlated with the reactivity dimension (table 18). Items which measure withdrawal effects and drug effects are scored predominantly in the true direction. Valid scores on the infrequent true response scale (47) may be found particularly in the subject who is feeling considerable subjective discomfort. Ss who give too many true or false responses can also be questioned verbally to determine if verbal responses are consistent with those found when the S took the test himself.

When Ss respond as they feel today in the standard instructions, the Ca cutting score of 70 is adequate. However, in some simulation instructions in which Ss are asked to simulate persons other than themselves, Ca may become quite elevated. A T-score of 73 may be acceptable when the S is given an instruction which is intrinsically more difficult. Caution must be exercised in accepting such tests as the Ca scale does reveal scalability in simulation tests. The examiner should at least try to determine whether the S merely gave random responses or whether he was making a serious effort. Some Ss who have simulated mental illness have gone through the motions of taking the test, but on questioning affirmed that they really did not know how to handle the task and, therefore, gave random responses.

Obtaining T-Scores for Scales Other than the Ca Scale

Two types of T-scores can be obtained: normalized T-scores on opiate addict norms and T-scores which assume a normal distribution that are based on five clinical groups. The normalized T-scores can be obtained for some drug scales (Haertzen 1966*b*) and are not given here. Normalized T-scores are useful on some drug scales when it is important to equalize SDs for different groups. On some drug scales such as PCAG (Haertzen 1966*b*), skewing was evident; that is, more very low than high scores were found, especially in opiate addicts under the no-drug (00) or placebo (01) conditions.

It should be noted that T-scores described in this manual have been calculated with reference to the average score obtained for five clinical groups on 925 Ss (see Standardization, p. 21). All scores were used in obtaining this average. The variance and SD of each scale were calculated from the within-groups sums of squares for the five groups. This procedure weights the means and SD toward the normal group as it had a slightly higher N (N = 219), and it underweights the alcoholic group with a N of only 148.

Uncorrected T-scores were calculated by the formula presented below.

$$T_{ik} = 50 + \frac{(X_{ik} - \overline{X}_{tot\ k})\ 10}{SD_{wi\ k}}$$

T_{ik} = Transformd score of the i th subject on the k th scale.

X_{ik} = The raw score of the i th subject on the k th scale.

TABLE 7

WORKING TABLE FOR CALCULATING UNCORRECTED AND CORRECTED T-SCORES

			Regression				Examples T Cor k		
			Coefficients				Condition 00 + 91		
Scale No.	Tot Mean k	Tot SD Wi k	Scale 127	Scale 102	Scale 207	Scale 87	$\overline{X}$ k	$\overline{T}$ k	$\overline{T}$ Cor k
101 Re	34.96	22.14	-.399	.120	.853	.162	19.16	42.86	47.29
2 GDP	15.48	7.623	-.506	.368	.481	.340	15.06	49.45	47.65
102 Pyp	37.79	6.568	-.493	.000	.000	.000	49.75	68.21	67.29
10 MBG	19.27	7.363	-.464	.086	-.022	1.009	14.32	43.28	46.54
108 SoW	15.54	5.611	-.019	-.029	.175	.244	17.83	54.08	57.24
111 Con	31.94	4.371	.290	-.287	-.227	.362	26.72	38.04	43.93
127 Mal	34.83	5.243	.000	.000	.000	.000	33.85	48.13	48.13
125 GDE	16.11	4.904	-.172	-.072	.752	-.079	16.62	51.04	57.08
123 Tir	7.156	2.457	-.176	.139	.659	-.246	6.497	47.32	48.06
29 Imp	25.50	5.458	-.514	.424	.214	.328	25.58	50.15	45.32
143 Int	16.21	4.732	-.358	.342	-.201	.557	18.13	54.06	49.18
115 Taste	1.238	1.798	-.323	.045	.666	.339	.4503	45.62	51.11
4 PCAG	12.77	5.813	-.292	.066	.864	-.068	8.939	43.41	47.74
7 AG	5.213	2.049	-.268	-.128	.465	-.013	4.260	45.35	50.43
11 MG	13.90	4.968	-.496	.270	.369	.392	11.34	44.85	44.23
12 BG	21.33	5.522	-.165	.067	-.661	.679	22.09	51.38	48.90
17 CS	17.43	3.901	.120	.076	.612	-.641	17.66	50.59	50.37
19 Ex	11.77	3.875	-.421	-.034	.140	.863	9.678	44.60	50.38
21 LSD	10.97	3.397	-.170	-.009	.695	-.150	9.830	46.64	50.77
47 I1	11.02	9.190	-.393	.054	.810	.335	3.696	42.03	48.28
48 IF	6.422	3.202	.027	-.390	.434	-.258	3.854	41.98	50.51
52 Mar	15.17	2.584	-.100	-.163	.401	.205	14.85	48.76	55.54
55 AWS	31.72	16.62	-.358	.179	.850	.069	22.46	44.43	47.36
87 Ef	29.92	8.967	-.157	-.029	-.652	.000	28.94	48.91	44.28
106 Pop	28.19	7.534	-.231	-.286	-.215	1.030	17.07	35.24	44.05
112 Cr	36.21	6.639	-.400	.458	.047	.383	36.52	50.47	44.34
122 Weak	14.99	3.954	-.022	-.101	.732	.156	11.16	40.31	46.55
129 Dr	6.081	2.398	-.235	-.093	.682	.025	5.266	46.60	52.97
136 Com	39.97	5.165	.075	.083	-.459	.252	37.63	45.47	42.22
145 Proj	20.46	5.627	-.414	.268	.269	.334	23.35	55.14	53.64
153 NAnt	18.33	7.961	-.133	.103	.875	-.452	16.18	47.30	49.17
161 ChrO	6.868	3.038	-.264	.166	.729	.205	5.763	46.36	49.57
163 SimO	11.73	7.506	.450	.041	.638	.623	4.599	40.50	47.32
191 WOW	27.15	8.037	-.324	.123	.861	-.081	23.43	45.37	48.56
199 WOWs	18.16	3.149	.079	.159	.391	-.616	18.13	49.90	46.67
207 SOW	17.86	10.13	-.276	.074	.000	.000	12.17	44.38	42.58
220 AW	59.21	7.506	-.408	.453	.220	.253	60.93	52.29	46.77
223 Hum	17.93	4.051	.262	-.373	-.514	.065	17.02	47.75	51.25

Total mean k (of scales) of 5 standardization conditions is in raw score units.

Total SD wi k (of scales) of 5 standardization conditions in raw score units.

$\overline{X}$ k is the mean raw score for a no-drug condition (00 + 91) using opiate addicts.

$\overline{T}$ k is the mean uncorrected T-score of condition 00 + 91

$\overline{T}$ cor k is the mean corrected T-score after correction for scales 127, 102, 207 and 87.

$X_{tot\ k}$ = Mean of the total standarization group (N = 925) on the k th scale. This mean is given under the column one for total mean of k (table 7).

$SD_{wi\ k}$ = Standard deviation within the five pooled standardization groups on scale k, column 2 (table 7).

Example of T-score calculation for Re, Scale #101:

If the raw score mean for a group (see column X_k in table 7) is 19.16 then its T_k for scale 101 would be:

$$50 + \frac{(19.16 - 34.96)\ 10}{22.14} = 42.86$$

The answer, 42.86, is given also under T_k of table 7 for Scale Re #101. Note that when the mean raw score for a group is converted to a T-score, it is suggested that the uncorrected T-score should contain at least one number to the right of the decimal when the uncorrected T-score is used to obtain a corrected T-score. No number to the right of the decimal is needed for individual Ss as the standard error of individual scores is always greater than one T-score point.

The speediest and most accurate procedure for obtaining uncorrected T-scores without the aid of a high speed computer is to calculate the T-score corresponding to each raw score and place these on the scoring template for the back half of the answer sheet. The T-score equivalents of each raw score for the 38 scales can be obtained from figure 2 when the T-scores are below 99. Figure 1 can also be used as a profile sheet. T-scores above 99 should be determined by the above formula.

Obtaining Corrected T-scores

Scales can be corrected for scales Mal #127, Pyp #102, SOW #207, and Ef #87 using T_k scores described above. Examples of corrected scores are given in table 7 for the combined conditions labeled 00 + 91. The steps include:

1. Correct the T_k score of scale 102 for the T_k score of scale 127:

$$T_{cor\ 102} = T_{102} - [-.493 \times (T_{127} - 50)]$$

−.493 is a regression coefficient which corrects for the correlation between scales 127 and 102 and is given under the column for regression for scale 127 on the intersection of the row for scale 102.

$$T_{cor\ 102} = 68.21 - [-.493 \times (48.13 - 50)]$$
$$= 68.21 - (-.493 \times -1.870) = 67.2881$$

or rounded to 67.29. This answer is given on the row for scale 102 under the column for $T_{cor\ k}$ in table 7.

2. Obtain the corrected T-score of scale 207:

$$T_{cor\ 207} = T_{207} - [-.276 \times (T_{127} - 50)]$$
$$- [.074 \times (T_{cor\ 102} - 50)]$$

Example: $= 44.38 - [-.276 \times (48.13 - 50)]$
$$- [.074 \times (67.2881 - 50)]$$
$$T_{cor\ 207} = 44.38 - (.51612) - (-1.2793)$$
$$= 42.5846$$

The rounded answer, 42.58, is given in the row for scale 207 and the column for $T_{cor\ k}$.

3. Obtain the corrected T-score for scale 87:

$$T_{cor\ 87} = T_{87} - [-.157 \times (T_{127} - 50)]$$
$$- [-.029\ (T_{cor\ 102} - 50)]$$
$$- [-.652\ (T_{cor\ 207} - 50)]$$

Example:

$$T_{cor\ 87} = 48.91 - [-.157\ (48.13 - 50)]$$
$$- [-.029\ (67.2881 - 50)]$$
$$- [-.652\ (42.5846 - 50)]$$
$$= 48.91 - (.2936) - (.5014) - (4.8348) = 44.2830$$

This answer is given under the row for scale 87 under $T_{cor\ k}$.

4. Obtain a corrected T-score for each scale with the following generalized formula:

$$T_{cor\ k} = T_k - [^{r}127_k\ (T_{127} - 50)]$$
$$- [^{r}102_k\ (T_{cor\ 102} - 50)]$$
$$- [^{r}207_k\ (T_{cor\ 207} - 50)]$$
$$- [^{r}87_k\ (T_{cor\ 87} - 50)]$$

T_k = The uncorrected T-score of the k th scale.

$^{r}127_k$ = The regression coefficient between scale 127 and the k th scale.

$^{r}102_k$ = The regression coefficient between scale 102 and the k th scale.

$^{r}207_k$ = The regression coefficient between scale 207 and the k th scale.

$^{r}87_k$ = The regression coefficient between scale 87 and the k th scale.

Example for scale 101:

$$T_{cor\ 101} = 42.86 - [-.399\ (48.13 - 50)]$$
$$- [.120\ (67.2881 - 50)]$$
$$- [-.853\ (42.5846 - 50)]$$
$$- [.162\ (44.2830 - 50)]$$
$$- 42.86 - (.7461) - (2.0746)$$
$$- (6.3253) - (-.9262) = 47.2908$$

The remaining answers for $T_{cor\ k}$ for scales of condition 00 + 91 are given in table 7. It can be noted that the formula given in 4 above applies also to scales 127, 102, 207, and 87. It becomes apparent though in calculating $T_{cor\ 207}$, for example, that T_{cor} for 102 must have been calculated.

The corrected T-scores were used to show similarities and differences between conditions within a standard frame of reference. To obtain the actual estimate of similarity or difference between a given group and other standard comparison groups, "t" tests were calculated on relevant scales between the condition in question and each of the comparison conditions (see below). The overall estimate of similarity (low sum of t^2) or difference (high sum of t^2) was determined by summing the squares of the "t" values of the condition in question with each of the comparison conditions.

The N used in the "t" test is somewhat arbitrary. An N of 10 has been used for convenience as it has been generally satisfactory for showing practical differences between populations. An N of 15 would be necessary to show additional important differences on particular scales between some drug conditions. For showing the overall similarity or differences between conditions, the N is not important as the differences are relative when N is constant.

The larger the actual N for a sample that is drawn from the populations sampled here, the smaller will be the "t" and the sum of t^2 for the similar populations when an N of 10 is substituted for the real N. It follows that large "ts" will be found for individual Ss as a S's performance is overlayed with individual differences.

The sum of t^2 has a function like the sum of the differences squared to show similarities and differences of subjects and conditions. The sum of t^2 over scales is preferred because the residual standard deviations of scales are quite different after the scales have been corrected for variation on scales 127, 102, 207 and 87. If the SD were constant the sum of D^2 would be feasible to use. D^2 could be used for uncorrected T-scores. (In another publication an example will be given using this simplified procedure because many persons would prefer the ease of calculation). For example, the residual SD of Re Scale 101 is only 4.087; whereas, it is 10.56 for Mal Scale 127 (table 8). It might be thought that the SD for scale 127 should be 10 as the SD for this scale was not corrected for variation on any scale. The upward adjustment is due to the fact that the within conditions SD on the scale is somewhat larger for 36 categories in project 1014 (table 3) than the five standardization conditions. On most scales the upward or downward adjustment of SD due to differences of the 36 categories from the standardization conditions is minor (see table 8). However, on scale 125 for General Drug Effects and 115 for Taste, the SD is much greater than for the nondrug conditions within the standardization groups.

It is emphasized that T-scores corrected for variation on scales 127, 102, 207 and 87 are to be used for calculating values of t if comparisons are going to be made with the results reported in the appendix. The standard deviations to be used have also been corrected for the above scales. The different types of variabilities are shown in table 8. The first column gives the T-score SD for the standardization groups; it is noted all of these are equal to 10 by definition. The next column gives the within-conditions T-score SD as found in 36 categories. The SD for 36 categories may be smaller or larger than 10. The next column gives the residual SD in T-score units for 36 conditions or categories. This is the residual SD within 36 conditions after correction has been made for scales 127, 102, 207, and 87.

In calculating "t" tests between a condition and other conditions within a comparison set, only scales were used which contributed to differences between conditions in the comparison set. In the clinical set only 10 scales have been used (see table 9). More scales could have been used, but the differentiation of groups appears to be about as great with this limited number of scales as with a larger number. The potentially greater utility and application of the clinical diagnostic set of scales demand greater simplicity or reduction in the number of calculations.

TABLE 8
UNCORRECTED AND CORRECTED T-SCORE
SD OF 36 CONDITIONS

CONDITION NO.	Stand Unc	36 Unc	36 Conditions	
			Resid	Resid
N	SDk	SDk	SDk	SE dif k
Scale No.				
101 Re	10	10.70	4.087	1.828
2 GDP	10	11.38	6.841	3.059
102 Pyp	10	10.08	8.768	3.921
10 MBG	10	11.29	4.855	2.171
108 SoW	10	10.06	9.732	4.352
111 Con	10	11.03	9.420	4.213
127 Mal	10	10.56	10.56	4.723
125 GDE	10	13.17	8.769	3.922
123 Tir	10	11.34	8.176	3.656
29 Imp	10	11.78	8.288	3.706
143 Int	10	10.04	7.548	3.376
115 Taste	10	14.40	9.317	4.167
4 PCAG	10	11.22	5.290	2.366
7 AG	10	10.59	8.970	4.012
11 MG	10	11.26	7.837	3.505
12 BG	10	10.53	5.747	2.570
17 CS	10	10.54	6.647	2.972
19 Ex	10	12.24	7.443	3.328
21 LSD	10	10.65	7.631	3.413
47 IT	10	11.26	4.701	2.102
48 IF	10	10.82	8.868	3.966
52 Mar	10	10.99	9.815	4.389
55 AWS	10	10.25	4.363	1.951
87 Ef	10	9.682	7.397	3.308
106 Pop	10	9.785	4.624	2.068
112 Cr	10	10.70	8.247	3.688
122 Weak	10	10.15	7.067	3.160
129 Dr	10	13.02	9.300	4.159
136 Com	10	10.61	9.239	4.132
145 Proj	10	10.34	8.291	3.708
153 NAnt	10	10.53	4.088	1.828
161 ChrO	10	10.82	6.810	3.046
163 SimO	10	13.15	5.647	2.526
191 WOW	10	10.80	4.803	2.148
199 WOWs	10	9.625	7.535	3.370
207 SOW	10	10.99	10.54	4.714
220 AW	10	10.19	7.873	3.521
223 Hum	10	10.01	7.629	3.412

Stand. Unc. SDk is the uncorrected T-score SD of each scale k of the five standardization conditions. 36 cond unc SDk is the standard deviation within for 36 conditions. Resid.SDk is the residual SD of scale k after correction for Scales 127, 102, 207 & 87. Resid. SE dif k is the residual standard error of difference for sub Ns of 10.

TABLE 9

CORRECTED T-SCORES OF SCALES USED IN THE CLINICAL SET

Scale No.	Resid SDk	Resid SE dif k	Op Ad 170+ 173	MI 26	Norm 28	Alc 86+87+ 88	Crim 94	Op Ad Sim MI 307
102 Pyp	8.768	3.921	63.6	45.9	36.0	52.6	59.6	45.0
108 SoW	9.732	4.352	52.7	58.7	46.8	39.4	49.4	75.2
111 Con	9.420	4.213	50.2	45.7	45.2	46.3	65.4	42.9
127 Mal	10.56	4.723	46.6	57.6	34.6	60.4	55.8	37.8
143 Int	7.548	3.376	48.0	50.4	49.9	47.8	49.6	42.4
87 Ef	7.397	3.308	48.1	53.8	44.1	54.4	50.8	50.5
106 Pop	4.624	2.068	46.6	50.9	50.6	51.9	50.3	41.0
136 Com	9.239	4.132	42.9	44.1	55.3	55.2	55.4	35.8
145 Proj	8.291	3.708	50.3	56.0	49.6	37.5	51.4	67.3
207 SOW	10.54	4.714	47.4	49.9	47.1	51.8	53.0	71.5

Resid SDk = SD of 36 conditions after correction for scales 127, 102, 207, & 87 Resid SE dif k = Residual standard error of difference determined from SDk for sub population N's of 10. Op Ad = Opiate Addicts; MI = Mentally Ill males; Norm = Normal college students; Alc = Alcoholics, Crim = Criminals; Op Ad Sim MI = Opiate addicts simulating mental illness.

Obtaining "t" Tests Between a Subject or Group and the Standard Comparison Groups

There are two sets of comparison groups on which "t" tests have been calculated. The first is the clinical group set and consists of the following groups and associated condition numbers: severe and general opiate addicts combined (Conditions 173 and 170), mentally ill males (Condition 26), normal college students (Condition 28), alcoholics (Conditions 86, 87, 88), criminals (Condition 94), opiate addicts simulating mental illness (Condition 307). The corrected T-scores of these conditions for the recommended scales are presented in table 9.

The second set, referred to as the drug set, consists of the following conditions found with opiate addicts: no-drug (Conditions 00 + 91), morphine (20 mg, Condition 20), nalorphine (32 mg/70kg, Condition 23, combined with cyclazocine, 1.2 mg/70kg, Condition 25), chlorpromazine (day 1, 25 mg. q.i.d., day 2, 50 mg, q.i.d., day 3, 75 mg one time only, Condition 40), LSD (1.5 mcg/kg, Condition 51), benzedrine (30 mg, Condition 60), alcohol (3.0 cc of

30% alcohol/kg, Condition 81), pentobarbital (250 mg, Condition 31) combined conditions for weak and strong opiate withdrawal (Conditions 168 and 154) and chronic opiate administration equivalent to 240 mg of morphine (Conditions 151, 152, and 153). The corrected T-score means for these conditions are given in table 11.

The basic formula for the "t" test, as used here, is:

$$t = \frac{T_{cor\ ki} - T_{cor\ kc}}{\sqrt{\frac{S_k^2}{N_i} + \frac{S_k^2}{N_c}}}$$

$T_{cor\ ki}$ = Corrected mean T-score for scale k for subject or group i.

$T_{cor\ kc}$ = Corrected mean T-score for scale k for the standard comparison group c.

S_k^2 = Residual SD^2 of scale k after correction for 127, 102, 207, and 87.

N_i = Sample size of group i.

N_c = Sample size of group c.

As pointed out above, a theoretical N of 10 has been used for both N_i and N_c. In order to obtain an undistorted sum of t^2 equal Ns must be used for N_i and N_c. The standard error of difference for sub Ns of 10 can be reduced to

$$\sqrt{\frac{S_k^2}{5}}$$

An example of the calculation was made for Condition 00+91 (opiate addicts) vs the comparison Condition 170+173 (opiate addicts) on scale 102. The corrected T-score for Conditions 00+91 and 170+173 respectively are 67.29 and 63.6. SD_{102} = 8.768.

$$t = \frac{67.29 - 63.6}{\sqrt{\frac{8.768^2}{5}}} = \frac{3.69}{3.921} = .9410$$

The "t" has been rounded off to 1 in table 10 where all the "ts" for the opiate addict Condition 00+91 have been presented. To facilitate calculations of "ts" several working tables are of use. Table 9 gives the corrected T-scores for the scales and the conditions used for the clinical set, the residual SD for 36 conditions, and the standard error of difference, that is $\sqrt{\frac{S_k^2}{5}}$, for sub Ns of 10.

Table 11 gives the same type of information for the scales used in the drug set. Table 12 gives the corrected T-scores for Condition 00+91 and the "t" tests between this condition and other conditions in the clinical set. Table 12 gives the comparable "t" tests for the difference between Condition 01+150 (placebo conditions) and the drug conditions. The "t" tests have been rounded off to two places to conserve space. The sum of t^2 is given on the bottom row of tables 10 and 12. These sums may be obtained by squaring each "t" value in columns of tables 10 or 12. It will be noted in table 10 that the smallest sum of t^2 was found between Condition 00+91 (opiate addicts) with another sample of opiate addicts (Conditions 170+173 of the comparison set). This means that subjects in Conditions 00+91 would be diagnosed as opiate addicts.

Condition 01 + 150 (placebo) was closest in fit to the no-drug condition within the drug set (table 12). This low sum of t^2 of 4 precludes the use of placebo as a separate diagnostic category in opiate addicts.

The sum of t^2 of each condition with the clinical sets and the drug sets are given in appendix table 4.

The number of scales recommended for "t" tests constitutes no special problem when they are done on high speed computers. The scales needed for drug studies could be shortened to the following minimal number: MBG–10, GDE–125, Tir–123, Taste–115, PCAG–4, MG–11, CS–17, Ex–19, LSD–21, Ef–87, Dr–129, NAnt–153, ChrOp–161, SOW–207. This shortened set of scales reduces the possibility of differentiation of acute effects of alcohol and pentobarbital and between withdrawal of alcohol and opiates. If a general depressant category is considered, thus, sacrificing some of the differentiation between alcohol, pentobarbital, chlorpromazine, and narcotic antagonists, then CS and Tir could be eliminated in favor of Dr and PCAG. If the user does not have a computer to calculate corrected T-scores and there is a great need for reduction of

TABLE 10

"t" TESTS AND SUM OF t^2 OF OPIATE ADDICTS
(CONDITIONS 00 + 91)
VS. CONDITIONS IN CLINICAL SET *

		$T_{\text{cor k}}$	Op Ad	MI	Norm	Alc	Crim	Op Ad Sim MI
Scale No.	ABR	00 + 91	170 173	26	28	86, 87, 88	94	307
102	Pyp	67.29	1	5	8	4	2	6
108	SoW	57.24	1	0	2	4	2	-4
111	Con	43.93	-1	0	0	0	-5	0
127	Mal	48.13	0	-2	3	-3	-2	2
143	Int	49.18	0	0	0	0	0	2
87	Ef	44.28	-1	-3	0	-3	-2	-2
106	Pop	44.05	-1	-3	-3	-4	-3	1
136	Com	42.22	0	0	-3	-3	-3	1
145	Proj	53.64	1	-1	1	4	1	-4
207	SOW	42.58	-1	-2	-1	-2	-2	-6
Σt^2			7	52	97	95	64	118

* t tests have been rounded off to integers. In actual calculations the t test should be carried out to 2 places to the right of the decimal. The Σt^2 reported in Table 4 of the appendix reflects this procedure.

scales, MBG, GDE, PCAG, Ex, LSD, Dr, ChrOp, and SOW may give an overall summary of the areas in which the test offers some power for differentiating drug conditions. In this abbreviated set there is less certainty about ChrOp because of the small N used for scale development and the N available for cross validation.

RELIABILITY

Reliability of scales was determined with uncorrected raw scores using the Kuder-Richardson KR-20 formula (Guilford 1954) which emphasizes the internal consistency of responses within an occasion and the product moment correlation which emphasizes consistency over occasions. Table 13 presents KR-20

TABLE 11

CORRECTED T-SCORES OF SCALES USED IN THE DRUG SET

	Resid	Resid	No Drug	MS	NAL CYC	CPZ	LSD	Benz	Alc	Pent	Op Withd	Op Chr
Scale No.	SDk	SE dif k	00+ 91	20	23 + 25	40	51	60	81	31	154+ 168	151, 152, 153
10 MBG	4.855	2.171	46.5	54.0	48.9	46.5	46.8	51.5	49.6	50.7	46.6	45.5
111 Con	9.420	4.213	43.9	43.5	42.4	42.0	39.4	42.2	40.5	41.9	52.5	44.9
125 GDE	8.769	3.922	57.1	66.3	74.3	63.7	68.4	65.9	72.1	69.5	47.6	56.1
123 Tir	8.176	3.656	48.1	52.3	54.2	56.1	42.0	47.4	52.9	56.4	47.6	48.2
115 Taste	9.317	4.167	51.1	61.6	63.6	58.0	57.6	61.6	57.0	59.2	47.8	53.2
4 PCAG	5.290	2.366	47.7	48.7	50.4	52.0	43.0	46.8	50.7	51.7	47.0	47.8
7 AG	8.970	4.012	50.4	48.7	51.8	48.6	48.6	48.7	63.6	52.2	51.4	51.3
11 MG	7.837	3.505	44.2	50.4	41.8	41.9	39.4	44.1	40.6	43.8	44.3	42.5
12 BG	5.747	2.570	48.9	47.6	46.3	48.2	48.0	50.7	47.5	48.2	53.6	49.2
17 CS	6.647	2.972	50.4	45.7	44.7	57.3	42.4	48.1	44.1	47.3	51.4	55.2
19 Ex	7.443	3.328	50.4	53.7	51.4	45.9	63.2	56.6	51.7	49.8	48.9	48.4
21 LSD	7.631	3.413	50.8	49.2	49.0	46.5	64.0	51.6	45.8	44.6	51.6	47.8
52 Mar	9.815	4.389	55.5	52.8	53.8	53.2	49.9	54.0	52.0	53.5	45.3	51.9
87 Ef	7.397	3.308	44.3	50.9	45.1	43.3	47.0	51.7	45.3	46.4	48.5	46.4
122 Weak	7.067	3.160	46.6	48.8	45.0	49.4	45.9	49.2	49.9	49.4	55.7	53.0
129 Dr	9.300	4.159	53.0	59.3	67.6	56.8	62.3	58.1	73.2	69.7	47.6	50.3
153 NAnt	4.088	1.828	49.2	46.0	56.0	49.6	48.1	46.4	49.5	49.9	45.9	48.5
161 ChrO	6.810	3.046	49.6	48.9	47.4	50.0	45.9	50.4	48.3	47.9	48.2	66.5
163 SimO	5.647	2.526	47.3	57.3	56.8	50.2	52.9	54.1	53.7	55.3	47.6	48.3
191 WOW	4.803	2.148	48.6	47.9	48.4	48.5	46.9	47.3	46.9	47.9	53.6	50.7
199 WOWs	7.535	3.370	46.7	41.7	36.6	45.2	39.8	42.3	39.4	40.7	56.8	51.9
207 SOW	10.54	4.714	42.6	48.1	62.4	50.0	55.8	44.6	50.8	49.9	63.0	50.3
220 AW	7.873	3.521	46.8	44.6	46.0	43.7	42.2	44.7	44.8	44.7	36.8	43.2
223 Hum	7.629	3.412	51.3	54.8	55.8	54.6	59.9	54.4	59.8	55.7	56.5	53.0

Resid SDk = SD of 36 conditions after correction for scales 127, 102, 207, and 87.
Resid SE dif k = Residual standard error of difference determined from resid SDk with sub population N's of 10.

TABLE 12

"t" TESTS AND SUM OF t^2 OF PLACEBO
(CONDITIONS 001 + 150)
VS. CONDITIONS IN THE DRUG SET *

		Cond. Placebo	No Drug	MS	NAL+ CYC	CPZ	LSD	Benz	Alc	Pent	Op Withd	Op Chr
		001+150	00+91	20	23+25	40	51	60	81	31	154+ 168	151, 152, 153
10	MBG	46.62	0	-3	-1	0	0	-2	-1	-2	0	1
111	Con	42.73	0	0	0	0	1	0	1	0	- 2	- 1
125	GDE	60.07	1	-2	-4	-1	-2	-1	-3	-2	3	1
123	Tir	49.30	0	-1	-1	-2	2	1	-1	-2	0	0
115	Taste	53.37	1	-2	-2	-1	-1	-2	-1	-1	1	0
4	PCAG	48.18	0	0	-1	-2	2	1	-1	-1	0	0
7	AG	49.97	0	0	0	0	0	0	-3	-1	0	0
11	MG	43.98	0	-2	1	1	1	0	1	0	0	0
12	BG	48.39	0	0	1	0	0	-1	0	0	- 2	0
17	CS	50.72	0	2	2	-2	3	1	2	1	0	- 2
19	Ex	50.36	0	-1	0	1	-4	-2	0	0	0	1
21	LSD	50.25	0	0	0	1	-4	0	1	2	0	1
52	Mar	55.23	0	1	0	0	1	0	1	0	2	1
87	Ef	43.14	0	-2	-1	0	-1	-3	-1	-1	- 2	-1
122	Weak	46.50	0	-1	0	-1	0	-1	-1	-1	- 3	-2
129	Dr	55.05	0	-1	-3	0	-2	-1	-4	-4	2	1
153	NAnt	49.42	0	2	-4	0	1	2	0	0	2	1
161	ChrO	49.53	0	0	1	0	1	0	0	1	0	-6
163	SimO	48.59	1	-3	-3	-1	-2	-2	-2	-3	0	0
191	WOW	48.97	0	0	0	0	1	1	1	0	- 2	-1
199	WOWs	44.98	-1	1	2	0	2	1	2	1	-4	-2
207	SOW	43.64	0	-1	-4	-1	-3	0	-2	-1	-4	-1
220	AW	46.62	0	1	0	1	1	1	1	1	3	1
223	Hum	51.80	0	-1	-1	-1	-2	-1	-2	-1	-1	0
$\Sigma\ t^2$			4	51	86	22	87	40	66	52	89	60

* "t" tests have been rounded off to integers.

coefficients for five clinical conditions and the product-moment correlation between scores for a placebo (01) and no-drug condition (00) within the addict group.

Reliability of scales is affected by the simplicity of the scales (indexed by the order of extraction in factor analytic, group variability, and criterion scales) and by the extent to which scales measure stable characteristics. Drug scales measure characteristics which fluctuate from occasion to occasion. Because of this characteristic KR-20 coefficients which refer to only one occasion frequently are vastly greater than the retest coefficients. This effect is evident for Re–101, AWS–55, SOW–207, PCAG–4, Ef–87, NAnt–153, and SimO–163. Relative to Re, GDP–2 measures stable characteristics and the retest reliability for GDP is about the same as KR–20. Retest coefficients for scales which are sensitive to differences between clinical groups tend to be higher than those for drug scales. Retest reliabilities have tended to be somewhat relatively higher for drug scales having low KR-20 coefficients than those with high coefficients; the reason is not clear.

Empirical drug scales (Hill et al. 1963*b*), not presented here, are correlated with reactivity; KR–20 correlations for these are generally higher than for the group scales which refer to the same drugs. For example, KR-20 for the empirical alcohol #6 scale was .72 in contrast to .313 for AG #7; KR–20 for the empirical pentobarbital #5 and chlorpromazine scales #3 of .86 and .81 respectively are higher than for PCAG #4 .655; morphine #8 .91 and amphetamine #9 .90 scales are somewhat higher than MBG #10 .838 in the addict no-drug condition.

The magnitude of KR–20 correlations vary with the order of factor extraction (see p. 8). Re #1 was the first factor analytic scale extracted and it had a KR–20 of .91; Ef (#22, not in the table), the second scale extracted had a KR–20 of .82; the average KR–20 of scales for the remaining eight factors (scales PI–23, Se–24, Un–25, Im–26, MF–27, In–28, Imp–29, 30–NP, (see pp. 7-9) was .51. A similar effect from the order of extraction, referring to simplicity of structure, is demonstrable on the Group Variability Scales (see pp. 6-7) and the Criterion Analysis Scales (pp. 10-12). Drug Correction Scales (p. 7) are even more complex than Group Variability Scales and have lower reliabilities than Group Variability Scales. Corrections tend to undermine the effects of individual differences. To illustrate, the KR–20 for the LSD Group Variability Scale #79 was .85 in contrast to .351 for the LSD #21 Drug Correction Scale. KR–20 for the Marihuana Group Variability Scale #15 was .77 in contrast to .071 for Mar #52. From the KR–20 table it can be seen that KR–20 for PCAG–4 is greater than CS–17.

The effect of corrector or suppressor items on reliability may differ depending on the condition. Reliability of GDE #125 is expected to be generally higher in drug conditions as compared with the no-drug condition as the error variance of suppressor items is apt to be more constant and equal to the nonsuppressor items in the no-drug condition. Variance of nonsuppressor items expands in drug conditions, thus, giving nonsuppressor items a greater potential effect. The KR–20 coefficients for no-drug (Condition 00) .602, amphetamine (Condition 60) .712, morphine (Condition 20) .782, LSD (Condition 51) .797, alcohol (Condition 81) .734, pentobarbital (Condition 30) .773 and chlorpromazine (Condition 40) .750 indicate the difference between drug and nondrug conditions. Another way of showing the effect of the suppressor items is to compare GDE #20 which contains no suppressor items and GDE #125 which contains suppressor items. KR–20 for GDE #20 is .91 for the no-drug condition and is vastly greater than .602 for GDE #125.

The variance for the noncorrector items in the LSD Scale #21 are higher in the LSD condition (51) than in the no-drug condition (00) or other drug conditions. The increased variance of primary LSD items overcomes the suppressor effect in the LSD condition (51) so KR–20 is increased to .765 from .351. There is some suppression even in LSD as KR–20 for the LSD Scale #79 which did not have the suppressor items was .96.

WOWs–199 is a complicated scale as the items scored true are correlated with the Reactivity dimension, but the items scored false are also positively correlated with Reactivity –101.

TABLE 13

KR-20 RELIABILITY COEFFICIENTS

SCALE NO.	SCALE	No. of Items	Condition No.	Criminals 94	Addicts 00 + 91	Alcoholics 86, 87, 88	Mentally Ill 26	Normal 28	Retest Correlation[a]
101	Re	150		.963	.929	.966	.952	.951	.658
2	GDP	52		.874	.871	.862	.891	.832	.876
102	Pyp	71		.710	.744	.680	.710	.720	.836
10	MBG	49		.840	.838	.873	.885	.774	.716
108	SoW	59		.746	.631	.765	.762	.604	.816
111	Con	60		.507	.633	.444	.449	.309	.782
127	Mal	60		.638	.575	.557	.578	.585	.794
125	GDE	60		.713	.602	.724	.617	.564	.540
123	Tir	17		.575	.359	.568	.647	.636	.290
29	Imp	53		.652	.776	.707	.744	.590	.848
143	Int	30		.800	.746	.742	.841	.629	.848
115	Taste	12		.761	.571	.822	.682	.625	.281
4	PCAG	46		.813	.655	.817	.789	.765	.462
7	AG	20		.356	.313	.227	.353	.308	.608
11	MG	30		.812	.795	.771	.832	.746	.760
12	BG	38		.784	.740	.803	.836	.719	.673
17	CS	37		.580	.449	.645	.727	.616	.422
19	Ex	39		.614	.594	.698	.760	.608	.502
21	LSD	32		.568	.351	.619	.422	.572	.370
47	IT	76		.920	.856	.930	.903	.876	.496
48	IF	29		.653	.669	.608	.734	.474	.720
52	Mar	40		.184	.071	.208	.203	.059	.516
55	AWS	111		.941	.897	.946	.938	.927	.702
87	Ef	55		.896	.850	.910	.925	.877	.631
106	Pop	60		.783	.801	.843	.856	.779	.775
112	Cr	60		.761	.788	.775	.826	.717	.842
122	Weak	40		.623	.514	.517	.553	.420	.614
129	Dr	25		.468	.242	.506	.298	.378	.342
136	Com	60		.727	.665	.578	.712	.536	.741
145	Proj	60		.699	.648	.709	.720	.508	.817
153	NAnt	55		.870	.788	.880	.888	.848	.494
161	ChrO	26		.515	.462	.554	.596	.529	.615
163	SimO	60		.887	.837	.883	.860	.833	.437
191	WOW	84		.799	.590	.813	.766	.771	.580
199	WOWs	35		.502	.239	.465	.613	.418	.475
207	SOW	80		.910	.801	.916	.865	.878	.490
220	AW	117		.697	.708	.678	.694	.578	.781
223	Hum	30		.702	.713	.689	.747	.648	.773
N				.171	.342	.148	.89	.219	.176

[a] The retest correlations were obtained for a no-drug and placebo conditions within opiate addicts (conditions 00 and 01).

The correlation between WOWs and Reactivity will depend upon the variance exerted by the true and false items. In opiate withdrawal conditions (154, 168, 205) variance of the nonsuppressor items (those scored true) is relatively greater than for the suppressor items (those scored false). The correlation between these scales for an opiate withdrawal condition was .623. In contrast in the amphetamine condition (60) the suppressor effect is greater so the correlation is negative or –.156.

The internal consistency of the CS–17 scale may differ considerably for some groups because of the effect of true and false items. The no-drug condition (00) may be in the middle range with respect to the effect for items scored true and false, so reliability is undermined. In the chlorpromazine condition (40) the true items should produce a larger effect and in LSD (51), morphine (20), or amphetamine (60) conditions the false items should produce an effect. Reliability in these conditions is increased thereby. The influence should affect the r with PCAG–4 and Ex–19 especially because the simple effects on these scales partly comprise or define the poles of CS–17. The r's between CS and PCAG and Ex respectively in the chlorpromazine condition (40) are .709 and –.406, in contrast to .272 and –.681 in the amphetamine condition (60).

Generally the KR–20 coefficients (table 13), as obtained in the five clinical groups, addicts (00 + 91), criminals (94), alcoholics (86, 87, 88), mentally ill (26), and normals (28), were quite similar, except for self-control, tiredness, WOW–191, CS–17, LSD–21, Mar–52, and WOWs–199. As pointed out above, CS, LSD, Mar, and WOWs are more complex scales and are affected by variance of suppressor and nonsuppressor items. WOW is more complex than was anticipated. The variance of WOWs true items is quite small in the addict no-drug condition, and the effect of this variance is attentuated by the false items. True items in the withdrawal conditions have great variance, and this acts to increase reliability to a maximum during withdrawal. The SD for the total scale is only 4.972 for the no-drug condition in contrast to 11.44 for combined opiate withdrawal conditions (154 and 168) or 11.75 for simulated opiate withdrawal (205).

Retest coefficients (table 13) are affected by the similarity of conditions. For instance, retest coefficients are generally higher between no-drug (00) and placebo (01) than between no-drug (00) and LSD (51) (Haertzen 1966*a*). Condition similarity also affects the correlations between simulation conditions. The retest coefficients between no-drug and opiate withdrawal are decreased. This effect is important as the predictive utility of scales may be quite different as a function of the simulations used. The influence of condition similarity occurs with tests other than the ARCI as well. Table 14 gives the retest coefficients between no-drug and simulated opiate withdrawal for the ARCI, CPI, MMPI, GZTS (standard form) and GZTS (today form constructed by Haertzen) using the standard scales from these tests plus the scales developed from uniform factors (described earlier, p. 8). In addition the standard scales of the Edwards Personal Preference Schedule (1959) were used. It will be noted that the retest coefficients for the revised GZTS which stresses immediate experience is much less than the standard form which stresses enduring experience. The reliability of Hostility Scales seemed to be relatively unaffected. The reliabilities of Sociability Scales (Si on MMPI, Sy on CPI, S on GZTS, Sy on ARCI) were all reduced over what they were when the conditions were held constant. The reliability of General Activity (G of the GZTS) and correlates of it on the other tests were most severely affected and were negative on a number of tests. It will be noted that the r for the ARCI Opiate Withdrawal Scale (#207) was also quite low (r .147). Severely lowered coefficients were obtained in spite of the fact that Ss were internally consistent (high KR–20) when the circumstances of testing are held constant.

The structure and meaning of the ARCI scales for the measurement of individual differences have been evaluated in a number of ways. The structure of scales may be most economically defined by factor analysis using the ARCI alone or in combination with other tests. Table 2 gives an indication of the factor structure of the ARCI plus three other tests, the MMPI, CPI, and GZTS. The table shows which test was best for measuring each factor. The

TABLE 14

Retest Coefficients Between No-Drug and Simulated Opiate Withdrawal Conditions for Equivalent Scales*

Parent Scale	Parent Scale		MMPI		CPI		GZTS			ARCI	
No.	Name	New Name	No.	r	No.	r	No.	rStan.	rRev.	No.	r
909	To	rHo	814	802	918	760	711	786	816	31	649
811	Sc	rSc	815	393	919	547	712	584	229	32	441
902	Sy	rSy	816	353	920	574	713	271	-082	33	646
22	Ef	rEf	817	510	921	438	714	192	214	34	093
708	T	rT	818	394	922	554	715	639	213	35	550
808	MF	rMF	819	550	923	689	716	314	518	36	415
26	Im	rIm	820	597	924	603	717	297	301	37	596
702	R	rR	821	521	925	374	718	490	129	38	374
20	GDE	rGDE	822	649	926	598	719	304	404	39	546
21	LS	rLS	823	297	927	527	720	526	328	40	221
701	G	rG	824	248	928	400	721	-119	-131	41	419
929	Cm	rCm	825	677	929	768	722	295	074	42	306
24	Se	rSe	826	780	930	704	723	068	149	43	666
	SU		833	417	937	420	730	455	235	49	232
	RS		834	891	938	601	731	610	740	50	407

*See Table 2 for the full names of the scales from which the factorially equivalent scales were derived. The scales which are equivalent to Tolerance of the CPI have been rotated and are referred to as Hostility. Decimals have been eliminated in the correlation; to obtain in correlation form, divide by 1000.

TABLE 14A

Retest Coefficients Between No-Drug and Simulated Opiate Withdrawal (Continued)

MMPI			CPI			EPP			CZTS				ARCI			ARCI (cont.)		
Scale No.	Scale	r	Scale No.	Scale	r	Scale No.	Scale	r	Scale No.	Scale	Stand. r	Rev. r	Scale No.	Scale	r	Scale No.	Scale	r
801	L	800	900	Do	599	751	Ach	448	701	G	-055	-395	101	Re	347	47	IT	290
802	F	493	901	Cs	559	752	Def	305	702	R	471	012	2	GDP	633	48	IF	353
803	K	669	902	Sy	173	753	Order	405	703	A	274	047	102	Pyp	666	52	Mar	331
804	Hs	282	903	Sp	538	754	Exh	158	704	S	338	146	10	MBG	215	55	AWS	364
805	D	280	904	Sa	426	755	Aut	591	705	E	553	277	108	SoW	484	87	Ef	-129
806	Hy	493	905	Wb	655	756	Affil	812	706	O	765	431	111	Con	440	106	Pop	033
807	Pd	511	906	Re	702	757	Intra	409	707	F	759	624	127	Mal	464	112	Cr	588
808	MF	774	907	So	375	758	Suc	323	708	T	584	185	125	GDE	050	122	Weak	299
809	Pa	736	908	Sc	630	759	Dom	237	709	P	659	737	123	Tir	-079	129	Dr	281
810	Pt	346	909	To	758	760	Abas	509	710	M	747	533	29	Imp	556	136	Com	-063
811	Sc	572	910	Gi	542	761	Nurt	532					143	Int	242	145	Proj	601
812	Ma	746	911	Cm	231	762	Change	609					115	Taste	203	153	NAnt	037
813	Si	242	912	Ac	646	763	End	169					4	PCAG	265	161	ChrO	061
			913	Ai	763	764	Heter	459					7	AG	448	163	SimO	539
			914	Ie	366	765	Aggr	681					11	MG	752	191	WOW	333
			915	Py	594								12	BG	-037	199	WOWs	138
			916	Fx	693								17	CS	-201	207	SOW	147
			917	Fe	644								19	Ex	470	220	AW	608
													21	LSD	284	223	Hum	411

MMPI - See Table 15 for abbreviations
CPI - See Table 16 for abbreviations
GZTS - See Table 17 for abbreviations
ARCI - See Table 5 for abbreviations
EPPS - Abbreviations

Ach - Achievement
Def - Deference
Order - Order
Exh - Exhibition
Aut - Autonomy

Affil - Affiliation
Intro - Introception
Suc - Succorance
Dom - Dominance
Abas - Abasement

Nurt - Nurturance
Change - Change
End - Endurance
Heter - Heterosexuality
Aggr - Aggression
SimOW - Simulated Opiate Withdrawal (results not given)

analysis was done at a time when the first 50 ARCI scales had been constructed or before the criterion scales were developed. An examination of table 5 (scales with numbers above 50) reveals that many of the recommended scales had not been included in the analysis. The factors isolated for the four tests can be maximally reverified with each test if uniform markers indicated in table 2 are used. This means, in the case of the ARCI, that Hostility (Scale #31) would be extracted first, *r* Schizophrenia (#32) would be extracted second and so on. The structure presented in table 2 does not precisely match the simple structure that has been typically found in independent factor analyses of the ARCI nor with any of the other tests because each test contains good scales for some factors but not for others. Consequently, extraction or correction of factors in this order is not generally recommended unless all four tests are used so that the best markers shown in the table are useable. Secondly, this structure as applied to the ARCI does not correspond to criterion group differences or factors (see p. 11). Thus, items correlated with the Schizophrenia scale of the MMPI failed to differentiate normals and mentally ill as expected (Haertzen 1969b). Tolerance on the CPI refers at least partly to a psychopathic dimension as the Socialization and Responsibility Scales of the CPI which correlate with Tolerance, the marker for the first factor, do differentiate psychopathic from nonpsychopathic groups. Correlations with the factor can be misleading. Emotional Stability, Objectivity, Friendliness, and Personal Relations Scales of the GZTS are correlated with Tolerance, but are not sensitive indicators of differences between psychopathic and nónpsychopathic groups. On the other hand, the Psychopathic Scale -102 of the ARCI which is correlated with Socialization, Responsibility, and Tolerance of the CPI is a sensitive indicator of psychopathic characteristics.

A comprehensive estimate of the amount of overlap of ARCI scales and scales from other tests in the measurement of individual differences without regard to factors is shown in tables 15, 16, and 17. They give the correlations of ARCI scales for Condition 00 with those in the MMPI (03), CPI (04), and GZTS (02) which were also given to opiate addicts under a no-drug condition.

The structure of the ARCI defined by the factor analysis of the ARCI alone is preferred to that found in the four tests as the factor loadings are more likely to be related to criterion group differences. The correlation between factor loadings of items and criterion group differences on items was first demonstrated for differences between LSD (51) and no-drug (00) (Haertzen 1961) and later for other drug effects (Haertzen 1962) and alcohol withdrawal (Haertzen et al. 1966). The criterion scales (see p. 11) represent a specific attempt to obtain scales whose internal structure (correlation of an item with a scale) corresponds with observed criterion group differences. Numerous factor analyses have been done with the ARCI with several groups or conditions (Haertzen 1961; Haertzen 1962; Haertzen 1965*b*; Haertzen et al. 1964; Haertzen and Fuller 1967) before the criterion scales were developed. Table 18 reports a factor analysis of ARCI scales including the criterion scales and is based on opiate addicts in a no-drug condition (00). The factor numbers are presented in the order defined in the development of criterion scales (see p. 10 to 12; p. 11 gives the order) insofar as possible. This order is not a precisely preferred order as pointed out in the section for discriminant function analyses of scales and groups (see table 4). From the standpoint of accounting for variance from item intercorrelations, the reactivity factor should be listed first, since any factor analysis of a random set of items in any group or condition will isolate this factor (Haertzen 1965*b*). Efficiency is the second most important factor for accounting for variation on items and probably the General Drug Effect factor is third. The Psychopath factor is possibly fourth in importance in accounting for item intercorrelation.

For practical purposes of differentiating clinical groups or drug effects, the order Maladjustment, Psychopath, Reactivity, and Efficiency is preferred as this order corresponds to the order used for correcting scales for discriminant function analysis. The logic for this order is given in more detail in the discriminant function section (pp. 32-36).

TABLE 15

Correlations between MMPI and ARCI Scales (N=221)

ARCI Scales		MMPI Scales																
Scale No.	Scale	801 L	802 F	803 K	804 Hs	805 D	806 Hy	807 Pd	808 MF	809 Pa	810 Pt+K	811 Sc+K	812 Ma	813 Si	836 Ant	837 Welsh A	838 Welsh R	844 SimOW
101	Re	-295	525	-534	393	275	-039	301	162	379	494	450	369	437	043	652	-302	657
2	GDP	-426	565	-701	248	021	-317	449	130	286	277	300	553	388	233	714	-497	553
102	Pyp	-441	232	-586	-051	-326	-541	232	-027	-144	-151	-097	538	006	422	381	-508	126
10	MBG	-255	237	-459	074	-128	-264	078	104	136	096	047	379	045	233	400	-471	138
108	SoW	350	227	102	-033	011	-092	-146	-250	024	-102	117	-033	054	-138	-171	137	021
111	Con	268	-171	253	-033	062	201	-151	018	077	-026	-055	-191	-145	-243	-173	149	-247
127	Mal	341	-370	458	-145	176	191	-178	-091	-175	-154	-185	-461	-033	-214	-411	462	-272
125	GDE	107	073	155	062	156	171	008	-024	028	081	162	-154	153	-057	-092	240	169
123	Tir	-177	194	-279	215	105	030	119	113	087	187	158	177	175	020	297	-180	341
29	Imp	-417	412	-632	217	-092	-356	331	022	096	144	114	461	234	227	562	-510	417
143	Int	-311	100	-354	-046	-225	-250	121	198	-009	003	-039	434	-197	275	282	-535	-064
115	Taste	-100	229	-216	203	082	022	112	048	128	139	162	185	084	061	240	-185	258
4	PCAG	-088	311	-248	313	301	091	129	154	236	298	296	116	355	-099	327	-055	465
7	AG	088	238	042	271	206	220	074	-003	198	272	326	043	185	-242	064	146	320
11	MG	-455	368	-654	271	050	-216	383	190	296	337	220	472	231	221	720	-516	463
12	BG	-171	-017	-192	-103	-297	-221	020	037	-054	-112	-134	268	-165	185	106	-338	-173
17	CS	055	046	-005	251	224	198	034	073	047	074	083	-034	161	-159	018	143	224
19	Ex	-114	245	-232	036	-084	-199	026	022	122	107	109	193	108	112	221	-233	124
21	LSD	097	103	066	130	268	178	119	007	134	229	226	-122	226	-164	046	211	277
47	IT	-180	458	-420	353	242	-035	196	136	336	356	374	305	338	003	476	-242	526
48	IF	306	115	245	179	275	315	038	002	199	155	265	-257	264	-282	-115	392	206
52	Mar	265	-100	298	-015	023	154	-249	-113	-075	-145	-010	-191	-188	-160	-309	182	-204

TABLE 15 CONTINUED

ARCI Scales		MMPI Scales															
Scale No.		801	802	803	804	805	806	807	808	809	810	811	812	813	836	837	838	844
	Scale	L	F	K	Hs	D	Hy	Pd	MF	Pa	Pt+K	Sc+K	Ma	Si	Ant	Welsh A	Welsh R	SimOW
55	AWS	-318	506	-557	418	258	-035	331	158	350	465	399	398	400	024	665	-332	650
87	Ef	-075	007	-195	-148	-272	-280	-093	002	-035	-135	-150	197	-125	185	084	-302	-206
106	Pop	023	068	-087	080	-046	-018	-108	017	149	110	079	144	-037	-036	109	-218	-024
112	Cr	-522	202	-655	067	-241	-461	269	027	021	001	-046	551	-032	345	553	-619	159
122	Weak	230	127	120	364	390	375	024	025	180	224	215	-126	260	-288	-021	294	312
129	Dr	102	125	073	106	114	126	047	-085	155	131	251	-057	100	-152	034	120	199
136	Com	-212	-265	-061	-115	-181	-099	003	106	-096	-105	-221	067	-328	155	025	-221	-287
145	Proj	-031	449	-377	134	-022	-256	094	-021	130	029	179	326	240	051	307	-258	281
153	NAnt	-093	261	-168	230	215	121	136	093	188	233	250	083	304	-036	214	031	425
161	ChrC	-045	270	-250	226	129	-039	059	-020	073	109	186	206	274	003	226	-042	367
163	SimO	-103	359	-333	254	098	-053	057	091	247	257	292	277	220	038	368	-243	358
191	WOW	-223	426	-405	344	104	-030	276	065	290	306	375	344	315	-033	494	-187	550
199	WOWs	-186	167	-237	207	104	041	219	104	112	179	197	230	125	009	287	-089	317
207	SOW	-013	323	-181	377	319	178	133	062	251	334	373	102	379	-149	274	034	520
220	AW	-404	445	-649	184	035	-355	344	095	221	256	188	528	214	261	646	-527	400
223	Hum	284	-400	590	-277	-054	209	-332	-081	-184	-253	-202	-455	-340	-225	-567	359	-519
	$\overline{X}$	4.213	6.900	15.13	4.588	20.90	18.89	22.71	24.85	9.502	26.86	26.99	21.18	24.67	18.37	11.80	15.45	37.54
	SD	2.307	4.197	5.143	3.571	4.508	4.794	3.808	4.541	3.202	5.194	5.775	4.540	6.992	3.240	8.070	4.791	14.93

TABLE 15 CONTINUED

MMPI Scales[a]

ARCI Scales No		L	F	K	Hs	D	Hy	Pd	MF	Pa	Pt	Sc	Ma	Si	Ant
					+.5K			+.4K			+1K	+1K	+.2K		
1	Re	-273	478	-547	-092	104	-158	-105	082	315	323	313	336	293	121
20	GDE	-286	449	-538	-081	036	-172	-164	066	299	279	286	332	251	126
32	rSc	-089	509	-299	143	298	051	155	081	496	515	587	247	310	-137
33	rSy	005	002	-140	-185	-214	-220	-080	-147	-164	-220	-122	274	-194	117
35	rT	-170	-105	-136	-090	-112	-033	033	185	-073	019	-049	220	-021	176
37	rIm	106	-018	066	094	037	082	058	-079	187	115	102	-059	049	-202
41	rG	080	-105	120	114	-016	164	027	-004	-049	-045	-101	-041	-107	-078
42	rCm	-109	-138	010	-035	-031	059	046	144	-049	-008	-128	-005	048	068
49	SU	031	391	-204	195	332	120	022	057	345	318	385	074	409	-125
50	RS	-332	319	-498	-151	046	-223	-179	084	211	202	158	318	117	149

a. These correlations were determined with MMPI-T-scores. Scores for ARCI scales #1 and 20 were converted to normalized T-scores.

L	Lie	Hy	Hysteria	Sc	Schizophrenia
F	Faking bad	Pd	Psychopathic deviate	Ma	Hypomania
K	Defensiveness	MF	Masculinity-femininity	Si	Social introversion
Hs	Hypochondriasis	Pa	Paranoia	Ant	Antisocial scale from Haertzen, Hill and Monroe (1968)
D	Depression	Pt	Psychasthenia	SimOW	Simulated opiate withdrawal

TABLE 16

CORRELATIONS BETWEEN CPI AND ARCI SCALES (N=177)

SCALE NO.	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	939
No.	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe	SimOW
101 Re	-229	-416	-447	-412	-257	-536	-336	-408	-436	-434	-416	-334	-554	-317	-483	-452	-085	041	585
2 GDP	-088	-463	-387	-417	-062	-668	-470	-508	-581	-629	-514	-338	-606	-507	-575	-497	-338	-057	507
102 Pyp	078	-324	-083	-125	168	-365	-437	-316	-518	-539	-500	-177	-382	-457	-335	-415	-404	-097	202
10 MBG	179	-123	-037	-268	-004	-309	-108	-100	-232	-281	-101	-217	-194	-284	-186	-170	-480	-079	004
108 SoW	-139	-131	-133	-171	-171	-064	-316	-089	137	-144	158	-478	-052	-064	-138	038	-022	-141	028
111 Con	074	287	183	-066	-111	169	371	281	381	294	459	041	314	196	255	374	-035	-030	-323
127 Mal	-095	199	170	110	003	392	328	306	493	291	384	247	437	272	269	275	278	139	-289
125 GDE	-180	-040	-154	131	-064	107	-088	-150	066	105	-078	044	010	186	-001	-042	404	142	179
123 Tir	-175	-275	-271	-220	-091	-209	-183	-309	-228	-238	-285	-074	-238	-137	-281	-266	057	120	347
29 Imp	-060	-444	-253	-168	049	-521	-488	-408	-629	-622	-548	-227	-537	-465	-471	-480	-363	-163	411
143 Int	419	065	258	-050	253	-251	049	008	-307	-201	-100	010	-036	-277	-032	-153	487	-039	-164
115 Taste	-057	-110	-108	-167	-108	-163	-091	-274	-096	-131	-035	-128	-135	-028	-096	-119	012	-005	144
4 PCAG	-286	-276	-419	-207	-222	-243	-215	-324	-222	-212	-245	-207	-325	-092	-275	-232	111	084	427
7 AG	-191	-126	-213	-140	-166	-168	-147	-101	-042	-065	-008	-313	-192	-011	-167	-022	188	125	269
11 MG	-015	-390	-298	-354	-086	-569	-288	-311	-581	-516	-513	-105	-541	-474	-460	-442	-385	004	416
12 BG	331	092	249	-055	188	-114	084	098	-093	-110	091	-031	061	-192	061	043	-523	-108	-276
17 CS	-224	-112	-121	041	-051	-036	-008	-156	-025	-091	-095	112	-078	006	-091	-093	221	104	208
19 Ex	-002	-104	-101	-138	-085	-255	-174	-035	-098	-147	-040	-313	-171	-173	-169	-079	-179	-120	053
21 LSD	-132	-036	-175	-005	-197	027	-080	-077	039	088	-058	-067	-092	094	-006	-028	195	036	201
47 IT	-167	-322	-363	-348	-193	-492	-298	-326	-299	-378	-270	-391	-421	-280	-376	-302	-115	022	442
48 IF	-318	-034	-352	-105	-262	107	-030	-107	108	167	041	-177	-046	219	-040	100	435	090	291
52 Mar	120	340	213	228	082	279	117	235	278	348	365	-115	306	307	284	252	225	-086	-236
55 AWS	-188	-423	-385	-385	-191	-535	-332	-415	-491	-482	-459	-221	-557	-358	-490	-473	-153	032	556
87 EF	226	050	155	-095	079	-099	029	169	020	-102	150	-131	078	-158	005	026	-435	-112	-281

TABLE 16 (CONTINUED)

CORRELATIONS BETWEEN CPI AND ARCI SCALES (N=177)

SCALE NO.	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	939
No.	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe	SimOW
106 Pop	109	027	053	-171	-072	-073	094	174	065	-021	207	-163	009	-112	-016	081	-349	-107	-179
112 Cr	192	-367	-034	-246	200	-479	-278	-189	-583	-617	-491	040	-407	-622	-422	-393	-574	-077	146
122 Weak	-287	-042	-226	-174	-328	-018	-073	-104	158	072	143	-208	-089	116	-067	020	288	066	-235
129 Dr	-068	-051	-177	016	-081	-052	-129	-069	-047	005	-067	-069	-107	011	-137	-044	268	025	199
136 Com	360	223	373	154	277	063	328	219	-033	060	026	398	185	-072	193	164	-222	-072	-356
145 Proj	-110	-341	-271	-342	-095	-389	-391	-259	-246	-461	-210	-472	-319	-341	-347	-297	-339	-063	247
153 NAnt	-242	-213	-313	-135	-153	-123	-194	-301	-220	-145	-291	-072	-280	-073	-184	-221	253	071	424
161 ChrO	-133	-267	-273	-216	-104	-218	-345	-252	-221	-284	-238	-286	-321	-189	-330	-252	-030	024	353
163 SimO	-062	-166	-213	-260	-179	-277	-210	-195	-158	-228	-082	-379	-242	-129	-221	-163	-126	-085	193
191 WOW	-117	-382	-393	-308	-107	-460	-353	-375	-439	-402	-402	-221	-466	-313	-4[illegible]3	-315	-055	048	505
199 WOWs	-032	-137	-149	-093	-046	-153	-154	-181	-251	-147	-255	027	-206	-109	-175	-111	055	066	271
207 SOW	-253	-244	-381	-248	-233	-240	-265	-317	-181	-177	-233	-253	-333	-039	-274	-211	140	027	441
220 AW	-026	-400	-190	-340	-018	-576	-348	-353	-575	-610	-469	-181	-543	-538	-488	-511	-421	-053	354
223 Hum	200	498	394	397	125	498	416	463	526	578	527	214	589	460	518	473	270	030	-521
939 SimOW	-524	-610	-717	-462	-321	-608	-477	-529	-494	-507	-642	-454	-739	-323	-694	-540	130	181	
1 Re	-095	-408	-332	-378	-162	-502	-375	-369	-467	-508	-368	-325	-514	-415	-461	-432	-274	-038	
20 GDE	-073	-371	-292	-371	-125	-455	-379	-312	-416	-505	-314	-319	-425	-401	-434	-354	-318	-107	
32 rSc	-072	-366	-354	-420	-178	-496	-195	-261	-401	-417	-255	-290	-415	-375	-478	-240	-194	046	
33 rSy	316	069	342	114	257	006	-101	-020	-087	-189	046	-019	-007	-233	-001	-010	-276	-106	
35 rT	124	004	049	-064	131	-022	027	-059	-116	-023	-206	152	-037	-073	-002	-178	-148	164	
37 rIm	-022	007	-042	-139	-116	-113	085	069	023	019	109	085	-062	-087	-028	226	-072	-185	
41 rG	148	257	166	271	050	111	159	-026	064	296	038	164	108	206	221	190	114	000	

TABLE 16 (CONTINUED)

CORRELATIONS BETWEEN CPI AND ARCI SCALES (N=177)

SCALE NO.	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	939
No.	Do	Cs	Sy	Sp	Sa	Wb	Re	So	Sc	To	Gi	Cm	Ac	Ai	Ie	Py	Fx	Fe	SimOW
42 rCm	072	149	070	050	-002	158	219	-025	080	221	-005	489	108	160	176	-011	059	058	
49 SU	-249	-278	-481	-380	-253	-303	-257	-293	-195	-220	-197	-391	-354	-117	-312	-164	113	060	
50 RS	055	-247	-088	-213	-001	-416	-221	-235	-355	-419	-260	-187	-319	-358	-263	-285	-404	-076	
0 Ca	-094	-124	-167	-245	-142	-054	-138	003	024	-131	003	-236	-092	-118	-230	020			
CPI $\overline{X}$	24.35	18.08	25.46	35.84	21.78	34.61	22.01	27.47	26.86	16.32	17.55	24.77	23.20	15.16	35.73	9.927	8.299	17.34	32.15
SD	4.854	4.097	4.508	5.361	3.270	5.468	4.962	5.215	8.241	5.470	6.544	2.759	5.076	4.514	5.561	2.583	4.002	3.308	12.51

CPI Scale Abbreviations:

Do	Dominance	Re	Responsibility	Ac	Achievement via conformance
Cs	Capacity for status	So	Socialization	Ai	Achievement via independence
Sy	Sociability	Sc	Self-control	Ie	Intellectual efficiency
Sp	Social presence	To	Tolerance	Py	Psychological-mindedness
Sa	Self-acceptance	Gi	Good impression	Fx	Flexibility
Wb	Sense of well-being	Cm	Communality	Fe	Femininity
				SimOW	Simulated Opiate Withdrawal

The scales Immaturity, Masculinity, and Thoughtfulness factors have been placed toward the end in table 18 as the marker scales Immaturity, Im (#37); Masculinity, Mas (#56); and Thoughtfulness, rT (#35) for these factors have been unimportant for differentiating criterion conditions that were of greatest interest. Mas –56, however, is the single most important scale for showing masculine-feminine differences. The Weak Opiate Withdrawal factor has been placed toward the end also, because there is a possibility that the factor and the marker scale WOWs–199 are an artifact for the factor associated with the disproportionate number of scales in the analysis regarded as indicators of opiate withdrawal.

A close examination of table 18 and the criterion analysis scales (p. 11 and 12) reveals that not all of the dimensions in the criterion analysis were found in extracting 13 factors in a no-drug condition. For instance, Taste, as a factor in the criterion analysis was not evident in the factor analysis of scales in the no-drug condition for opiate addicts. The mean and variance for Taste in the no-drug condition were very small. The mean and variance for Taste were also low as compared to those for drug conditions. It is not a highly unique scale as can be seen in the factor analysis of the no-drug condition (table 18) nor in the intercorrelations with other scales for 36 criterion conditions (see table 19 for the correlations; table 3 lists the 36 conditions from project 1014 used in calculating correlations). Taste is correlated with markers for several factors such as Reactivity (r = .697), General Drug Effect (r = .728), and Tired (r = .510). As pointed out under reliability, the strucutre of scales as indexed by their intercorrelation and variance for true and false items is not precisely the same for different conditions. Such differences are important for showing underlying determinants for correlations (Haertzen 1966*a*), but there is a great enough overall similarity in correlations between scales for different conditions to warrant uniform corrections in discriminant function analyses. This similarity is attested by the terrifically high correlations between some scales for 36 conditions (table 19).

The factor structure for the ARCI alone for opiate addicts in a no-drug condition 00 (table 18) can be compared with that found for four tests, the ARCI along with the MMPI, GZTS, and CPI (table 2). The Reactivity Factor and Reactivity Scale on the ARCI (table 18) account for some variation on scales correlated with Hostility and Tolerance (factor 1, table 2), Schizophrenia (factor 2, table 2) and some portion of the General Drug Effect factor (factor 9, table 2) or various drug and withdrawal effects. The ARCI Psychopath factor (table 18) and scale accounts for some variation on Tolerance (factor 1, table 2) and Restraint or Impulsivity (factor 8, table 2). Efficiency (factor 4), Immaturity (factor 7), General Drug Effect (factor 9), LSD (factor 10), and Sentimentality (factor 13) shown in table 2 were most evident on the ARCI. The Social Withdrawal Scale –108 (table 18) is polar to the Sentimentality factor (factor 13, table 2). The Social Withdrawal Scale appears to be a measure of mental illness. SoW is also correlated with the F scale of the MMPI (table 15 which is sensitive to psychosis. However, it is not correlated with other psychotic scales of the MMPI (table 15). It is correlated with other scales measuring test-taking attitudes, the highest being with Communality on the CPI (r = –.478, table 16). However, it was correlated both with faking good (r with L = .350) and bad (r with F = .227) on the MMPI (table 15). On the ARCI, SoW is negatively correlated with Competitiveness –136 (r = –.564) and positively with Projection –145 (r = .626, table 19). The LSD factor (table 2, factor 10 is polar both to Efficiency and Tiredness factors (table 18). The Self-Control Scale –111 is polar to Impulsivity (factor 8, table 2). Self-control indicates a slight tendency to present a good impression (r with L and K of the MMPI, Gi of CPI), restraint in personal actions (negative r with Ma scale of the MMPI, Restraint of GZTS, positive r with Responsibility and Socialization of the CPI).

The ARCI Maladjustment factor (table 18) is most difficult to interpret in terms of the factors shown in table 2. The Mal –127 scale differentiates normals from other clinical groups (opiate addicts –170 + 173, criminals –94, alcoholics –86, 87, 88, and the mentally ill

TABLE 17

CORRELATIONS BETWEEN THE GZTS AND ARCI SCALES (N=175)

CORRELATIONS[a]

Scale No.	No. Scale	701 G	702 R	703 A	704 S	705 E	706 O	707 F	708 T	709 P	710 M	742 Sim OW	Condition 00 ARCI Mean	SD
101	Re	061	-154	-255	-386	-505	-533	-278	163	-344	-222	443	20.10	13.50
2	GDP	160	-180	-157	-302	-483	-576	-492	232	-448	-282	330	15.22	7.596
102	Pyp	262	-188	224	056	-201	-282	-611	240	-492	-186	-089	49.86	6.448
10	MBG	186	060	012	-011	-159	-289	-204	265	-224	-222	-021	14.85	6.666
108	SOW	-049	012	-044	-112	149	052	-139	-120	-129	143	068	17.62	5.274
111	Con	-033	294	031	123	192	108	303	007	145	-078	-140	27.25	5.330
127	Mal	-184	252	-087	118	327	402	453	-265	373	141	-134	33.55	5.061
125	GDE	-110	-076	-166	-151	031	095	140	-217	126	220	164	16.06	4.483
123	Tir	-026	-035	-190	-223	-325	-297	-135	097	-237	-141	316	6.531	1.780
29	Imp	249	-390	013	-126	-303	-413	-570	094	-425	-202	125	25.85	6.198
143	Int	252	101	335	265	-068	-171	-301	417	-181	-286	-329	18.33	4.683
115	Taste	035	-070	-077	-202	-192	-186	-097	-015	-169	-053	239	.4686	.8762
4	PCAG	-101	-087	-243	-320	-325	-308	-094	051	-204	-086	414	9.109	3.981
7	AG	053	-118	-145	-211	-241	-194	-099	041	-166	046	269	4.371	2.206
11	MG	210	-126	-124	-212	-479	-549	-320	274	-339	-351	235	11.65	4.765
12	BG	165	159	202	201	040	-037	-115	305	-095	-136	-256	22.30	5.134
17	CS	-212	017	-154	-215	-146	-007	074	-045	-037	041	284	17.51	2.760
19	Ex	105	-008	-066	-084	-022	-180	-112	123	-185	-095	016	9.926	2.729
21	LSD	034	-075	-131	-208	-109	-076	028	-020	-011	073	198	9.931	2.427
47	IT	028	-049	-283	-370	-361	-390	-149	107	-301	-159	406	3.914	4.522
48	IF	-203	-029	-269	-303	-089	021	190	-236	054	162	380	3.789	2.970

TABLE 17 CONTINUED

CORRELATIONS

Scale	No.	701	702	703	704	705	706	707	708	709	710	742	ARCI Condition 00	
No.	Scale	G	R	A	S	E	O	F	T	P	M	Sim OW	$\overline{X}$	SD
52	Mar	-032	033	-125	039	242	200	282	-209	065	057	-040	14.61	1.997
55	AWS	050	-183	-215	-362	-530	-525	-314	169	-345	-245	434	23.19	10.51
87	Ef	149	130	122	188	134	-019	-074	147	-065	-130	-255	29.13	6.447
106	Pop	068	158	044	065	055	-088	011	133	027	-098	-114	17.82	6.986
112	Cr	305	-108	194	154	-275	-451	-472	323	-373	-376	-136	36.71	6.878
122	Weak	-234	017	-330	-351	-194	-068	116	-052	-009	056	413	11.25	3.186
129	Dr	045	-162	-120	-071	-056	-087	011	-098	-005	083	111	5.291	1.882
136	Com	184	143	262	361	077	029	085	156	099	-117	-392	37.79	5.317
145	Proj	025	-025	-076	-223	-161	-288	-352	109	-358	-197	210	23.71	5.627
153	NAnt	-115	-145	-191	-340	-291	-223	-078	041	-117	029	397	15.24	5.556
161	ChrO	002	-039	005	-175	-242	-277	-295	168	-271	-121	210	5.897	2.584
163	SimO	058	006	-168	-215	-197	-278	-121	125	-231	-075	223	4.949	4.863
191	WOW	101	-135	-117	-269	-430	-438	-334	171	-390	-175	336	23.45	4.933
199	WOWs	-024	005	-013	-105	-331	-248	-184	207	-160	-208	174	18.14	2.069
207	SOW	-020	-057	-235	-345	-357	-322	-128	085	-217	-067	393	12.30	6.167
220	AW	115	-212	-025	-161	-427	-513	-461	217	-401	-299	211	61.38	6.937
223	Hum	-068	166	167	358	531	488	393	-250	372	269	-381	16.77	3.610
1	Re	082	-149	-211	-330	-415	-494	-299	204	-394	-246		51.88	9.413b
20	GDE	091	-105	-192	-266	-332	-458	-293	127	-337	-191		51.70	9.407b
22	Ef	220	063	268	205	026	-112	-245	301	-179	-168	-264	33.33	7.063
31	Ho	231	-274	-034	-176	-424	-565	-585	203	-502	-296		13.62	6.393
32	rSc	109	003	-101	-192	-359	-428	-200	203	-190	-123		13.06	4.246
33	rSy	219	-084	335	318	095	024	-302	126	-256	049		22.54	3.570

TABLE 17 CONTINUED

CORRELATIONS

Scale No.	No.	701	702	703	704	705	706	707	708	709	710	742	ARCI Condition 00	
	Scale	G	R	A	S	E	O	F	T	P	M	Sim OW	X	SD
35	rT	101	082	135	-072	-266	-093	-157	480	-006	-148		23.88	3.450
36	MF	-026	022	-077	-254	-445	-353	-202	320	-178	-335		16.87	4.264
37	IM	034	106	026	098	072	-002	065	-035	135	072		17.31	4.046
41	rG	400	-093	153	181	-126	-039	-061	096	057	023		21.63	3.465
42	rCm	-002	-014	-008	-062	-051	094	071	006	211	073		24.86	3.474
43	rSe	198	-014	073	138	-208	-324	-140	241	-128	-298		23.51	4.804
49	SU	-065	-068	-346	-427	-307	-277	-036	-031	-211	-042		7.651	5.790
50	RS	164	-037	-092	-136	-251	-346	-230	231	-283	-221		29.08	4.902
MEANS		17.16	16.55	17.99	19.86	18.00	17.70	12.57	20.42	15.00	18.14	33.83		
SD		5.024	4.301	4.596	5.341	5.264	5.391	5.739	4.375	4.665	3.871	11.99		

a. The decimals have been eliminated in the correlations.

b. Normalized T-Scores were used on Scales 1 and 20

c. SimOW-Simulated Opiate Withdrawal scale consists of items which differentiated a simulated opiate withdrawal condition and no-drug condition for both the new and old form of GZTS.

GZTS Scale Abbreviations

G	General Activity	O	Objectivity
R	Restraint	F	Friendliness
A	Ascendance	T	Thoughtfulness
S	Sociability	P	Personal Relations
E	Emotional Stability	M	Masculinity

-26, 27). The scale would be considered a very subtle measure of maladjustment since it is positively correlated with scales suggesting a good impression (positive r with L and K and negatively with F of the MMPI, table 15; positively with E, O, F, and P of the GZTS, table 17; positively with Wb, Gi, etc. from the CPI, table 16). These correlations are completely opposite the usual expectations as the correlations suggest positive rather than negative characteristics. The only correlation which gives a clue to the type of maladjustment characteristic it measures is the significnat r with the Welsh R Scale (r = .462). The R scale is regarded by Welsh as the most important indicator of the 2nd MMPI factor, and typically it is positively correlated with MMPI Neuroticism Scales; a number of studies have demonstrated a factor involving neurotic scales (Dahlstrom and Welsh 1960) and can be isolated in addicts upon factor analysis of the MMPI alone. The r with the Welsh scale indicates that Mal -127 detects the sort of maladjustment associated with repression, denial, or rationalization. The MMPI neuroticism scales also measure some of the acute distress associated with both opiate (Haertzen and Hooks 1969) and alcohol withdrawal (Shaffer, et al. 1962). The distress indicators in the neuroticism scales could represent a factor of repression and denial. Both the Opiate (SOW) and Alcohol Withdrawal Scales (AWS) are positively correlated with the distress aspects of Hs and D; AWS is negatively correlated with Welsh R. Hy appears closer to the Welsh R.

VALIDITY

Tables 15 (MMPI), 16 (CPI), and 17 (GZTS) show that ARCI scales are correlated with other tests which measure individual differences in personality. However, table 4 which shows the results of four discriminant function analyses indicates the main sources of validity of the ARCI. There are scales which show differences between drugs, clinical groups, and simulation conditions. There are substantial differences between simulations in each of the seven types previously mentioned (see pp. 19-20). For instance, there are differences between simulations of classes of persons [ideal self (301), alcoholic (308), mentally ill (307), criminal (310), mother (302), father (303)] and classes of affective states [pleasantness (313), anxiety (314), tiredness (315), depression (311), anger (316), and boredom (324)].

The reader may obtain a general estimate of the difference between any condition pair by employing the SD of 10 on any difference with uncorrected T-scores (appendix table 2). The residual SD (table 8) needs to be used for determining differences on corrected T-scores (appendix table 3).

The shortened classification system for drugs and clinical groups based on discriminant function analysis has been partially validated. Numerous samples of opiates and the no-drug condition have indicated the validity of the ARCI for making these classifications. Chronic opiate and withdrawal categories have been validated by the correct placement of chronic methadone (513) and withdrawal (515) effects. Testing of many drugs believed to be the same is necessary to determine whether fewer or more standards are needed. For instance, misclassification of barbiturates as alcohol might suggest that these categories should be combined.

Several validation samples of addicts and normal subjects and one sample of mentally ill (43) (Haertzen 1964) confirm the utility of the scales for clinical classification by DFA. Although differences between alcoholics (86, 87, 88), criminals (94), and opiate addicts on the ARCI scales were greater than those reported previously for the MMPI (Hill et al. 1962), further testing of these types from a variety of settings seems warranted because of the general failure of investigators to cross-validate alcoholism or opiate addict scales (Haertzen and Panton 1967; Haertzen, Hill, and Monroe 1968). There was no difference between alcoholics who were and were not members of Alcoholics Anonymous (Haertzen et al. 1968).

Comparisons that have been made with other tests for showing drug effects at the Addiction Research Center have shown that the ARCI was the most effective. It was more effective for showing the effects of morphine, pentobarbital, and benzedrine than the MMPI

TABLE 18

VARIMAX ROTATION OF PRINCIPAL AXIS FACTORS IN ADDICTS
(CONDITION 00 AND 01 PROJECT 1007)

		FACTORS												
		Re	Pyp	Ef	SoW	Con	Mal	GDE	Tir	AG-IF	Im	Mas	WOW	rTh
		1	2	3	4	5	6	7	8	9	10	11	12	13
101	Re	944*	154	068	-117	-089	-018	-073	-046	009	077	-035	013	-076
2	GDP	650	591	247	-013	-157	032	-093	039	017	092	-058	-046	030
102	Pyp_2	165	838	097	-092	068	-162	-002	002	048	282	095	-047	084
10	MBG	341	089	873	-069	-045	000	003	019	071	-005	-047	-096	044
108	SoW	086	096	023	875	029	109	139	-035	-085	058	075	-038	-172
111	Con	-110	-479	362	023	494	175	-360	-052	038	191	-070	-077	010
127	Mal	-404	-333	-268	-017	083	681	083	-021	-067	-043	-044	001	-159
125	GDE_3	233	-077	-556	118	-200	016	661	-019	-025	-117	-100	-086	-036
123	Tir	619	132	-189	-096	062	-048	254	450	040	-127	-059	089	091
29	Imp	478	604	208	-111	-303	-112	-070	074	051	102	152	-004	042
143	Int	051	373	663	-198	110	-136	-035	002	-190	-087	-102	097	287
115	Taste	639	-018	158	033	036	036	427	-031	-108	-124	000	-135	124
4	PCAG	825	036	-166	034	003	-068	158	255	060	-043	-012	021	-019
7	AG	404	-141	-173	244	031	-183	010	-135	374	156	-032	012	-021
11	MG	561	360	357	-411	-076	-103	-176	020	045	148	-124	-003	087
12	BG	-236	168	794	-034	099	-035	-218	-017	108	015	003	037	184
17	CS	359	018	-593	025	127	047	102	340	-083	-149	-013	155	113
19	Ex	237	-035	682	040	-049	047	057	-335	092	097	017	-146	-178
21	LSD	343	-150	-419	54	-147	-041	-035	-485	053	065	108	093	022
47	II	900	016	169	025	073	029	141	-016	-076	-032	-032	-009	-063
48	IF	188	-352	-458	316	-027	-095	021	009	373	263	-152	-050	-194
52	Mar	084	-303	-017	311	055	067	039	-298	-132	-147	-029	-079	-074
55	AWS	918	243	014	-156	-072	014	-105	-007	-070	076	-011	031	-030

TABLE 18 CONTINUED

		Re	Pyp	Ef	SoW	Con	Mal	GDE	Tir	AG-IF	Im	Mas	WOW	rTh
		1	2	3	4	5	6	7	8	9	10	11	12	13
87	Ef	-211	009	923	057	003	070	-105	-060	027	014	-014	-103	-070
106	Pop	156	-306	830	068	052	048	-104	033	026	265	055	-017	-015
112	Cr	214	662	393	-408	063	-030	019	025	-137	163	-050	131	078
122	Weak	554	-343	-289	271	125	078	006	101	226	-020	043	-012	001
129	Dr	305	-082	-347	-008	028	024	611	-078	188	190	003	-068	-172
136	Com	-330	007	361	-648	287	022	-078	-141	-205	054	012	099	060
145	Proj	389	429	289	606	093	-010	-064	079	-067	-017	-097	-158	035
153	NAnt	675	110	-558	030	-021	-085	117	118	050	-059	022	123	013
161	ChrO	617	164	-047	351	-026	064	076	-033	112	-020	-035	161	123
163	SimO	796	-061	407	081	017	057	289	-055	072	-093	037	-006	-028
191	WOW	747	242	-205	-029	026	-092	038	-048	033	067	-053	385	021
199	WOWs	280	189	-282	-164	-052	-096	-273	159	-098	-098	-010	673	110
207	SOW	865	-017	-306	105	037	025	166	-093	118	007	006	102	119
220	AW	514	581	326	-186	-112	012	-111	119	-135	084	-006	-196	-107
223	Hum	-579	-497	-020	-036	077	040	185	-125	098	-058	016	112	-188
1	Re	847	161	262	-012	011	-034	-035	-102	-056	069	-042	024	-189
20	GDE	845	071	422	064	-033	023	126	-080	-001	-010	005	-059	-114
22	Ef	-082	240	881	-027	005	-103	-124	-042	-089	-028	-003	003	102
32	rSc	532	061	145	000	051	-122	-058	-049	064	397	-290	-008	-158
33	rSy	-097	412	099	146	272	037	124	-083	003	-192	367	200	005
35	rTh	030	169	-043	-184	-090	-146	-013	148	013	-076	-091	083	597
37	Im	-098	-290	060	-140	155	-057	-030	-022	068	690	045	012	018
41	rAct	-038	-130	-193	-178	-035	-138	005	-208	029	138	120	031	555
42	rCm	-042	-102	-215	-209	-178	105	-010	346	-177	-058	085	-080	454
49	SU	839	-170	-099	185	046	-025	127	-009	131	110	-105	-033	-153
50	RS	680	207	398	-151	078	078	112	-019	-271	-172	055	020	051
56	Mas	-324	055	-115	268	081	-108	-011	-012	076	-062	664	090	-097

* The decimal has been eliminated from factor loadings. Example, 944 equals .944.

TABLE 19

WITHIN CONDITIONS CORRELATIONS FOR 36 CONDITIONS (PROJECT 1014)

		101	2	102	10	108	111	127	125	123	29	143	115	4	7
		Re	GDP	Pyp	MBG	SoW	Con	Mal	GDE	Tir	Imp	Int	Taste	PCAG	AG
101	Re	1.000													
2	GDP	.780	1.000												
102	Pyp	.288	.528	1.000											
10	MBG	.320	.515	.294	1.000										
108	SoW	.088	.145	-.012	.032	1.000									
111	Con	-.248	-.282	-.360	.070	-.076	1.000								
127	Mal	-.399	-.506	-.493	-.464	-.019	.290	1.000							
125	GDE	.597	.323	.031	.046	.217	-.498	-.172	1.000						
123	Tir	.581	.426	.192	.040	.001	-.276	-.176	.547	1.000					
29	Imp	.520	.740	.575	.532	.027	-.375	-.514	.165	.262	1.000				
143	Int	.113	.335	.435	.618	-.140	.078	-.358	-.227	-.031	.395	1.000			
115	Taste	.697	.534	.194	.420	.125	-.199	-.323	.728	.510	.354	.156	1.000		
4	PCAG	.838	.610	.194	.141	.127	-.291	-.291	.677	.810	.365	-.067	.646	1.000	
7	AG	.457	.307	.036	.051	.230	-.112	-.268	.419	.284	.182	-.150	.332	.464	1.000
11	MG	.684	.764	.449	.618	-.226	-.118	-.496	.200	.388	.669	.458	.528	.501	.182
12	BG	-.404	-.060	.132	.523	-.092	.361	-.165	-.588	-.485	.083	.595	-.196	-.540	-.310
17	CS	.360	.114	-.002	-.466	.022	-.204	.120	.379	.625	-.060	-.343	.267	.574	.175
19	Ex	.399	.424	.182	.709	.107	-.008	-.421	.216	-.170	.413	.393	.470	.100	.166
21	LSD	.634	.327	.077	-.067	.087	-.219	-.170	.484	.178	.182	-.121	.427	.445	.336
47	IT	.919	.714	.235	.412	.206	-.195	-.393	.624	.544	.451	.165	.741	.792	.440
48	IF	.249	.011	-.309	-.284	.305	-.081	.027	.410	.185	-.110	-.575	.126	.324	.400
52	Mar	.392	.199	-.074	.101	.220	-.002	-.100	.396	.157	-.007	-.066	.433	.330	.255
55	AWS	.975	.782	.312	.256	.062	-.264	-.358	.561	.619	.527	.107	.656	.841	.414
87	Ef_3	-.356	-.019	.056	.673	.041	.308	-.157	-.468	-.514	.134	.495	-.152	-.513	-.241

TABLE 19 CONTINUED

		101	2	102	10	108	111	127	125	123	29	143	115	4	7
		Re	GDP	Pyp	MBC	SoW	Con	Mal	GDE	Tir	Imp	Int	Taste	PCAG	AG
106	Pop	.028	.162	-.103	.780	.040	.389	-.231	-.232	-.225	.222	.488	.133	-.141	-.036
112	Cr	.395	.619	.544	.532	-.203	-.124	-.400	-.052	.164	.607	.615	.277	.195	-.048
122	Weak	.525	.237	-.065	-.083	.173	-.106	-.022	.524	.514	.065	-.323	.395	.641	.382
129	Dr	.621	.360	.046	.147	.192	-.322	-.235	.797	.507	.229	-.154	.594	.665	.487
136	Com	-.277	-.173	.026	.192	-.564	.379	.075	-.498	-.344	-.076	.431	-.199	-.444	-.389
145	Proj	.432	.602	.407	.360	.626	-.114	-.413	.219	.227	.428	.255	.346	.375	.228
153	NAnt	.765	.467	.144	-.195	.089	-.326	-.133	.648	.698	.227	-.207	.488	.819	.411
161	ChrO	.730	.616	.256	.219	.296	-.272	-.264	.543	.464	.396	.009	.614	.682	.420
163	SimO	.787	.672	.253	.670	.168	-.189	-.450	.631	.481	.527	.270	.802	.693	.375
191	WOW	.890	.659	.253	.120	.093	-.256	-.324	.604	.615	.414	.015	.642	.819	.441
199	WOWs	.288	.148	.081	-.426	-.138	-.156	.079	.054	.354	.032	-.190	-.008	.329	.063
207	SOW	.901	.603	.192	.112	.165	-.305	-.276	.735	.663	.362	.068	.704	.879	.494
220	AW	.589	.751	.544	.473	.028	-.208	-.408	.129	.315	.649	.415	.374	.406	.107
233	Hum	-.658	-.705	-.412	-.147	-.159	.237	.262	-.271	-.476	-.485	-.124	-.401	-.575	-.234

		145	153	161	163	191	199	207	220	223
		Proj	NAnt	ChrO	SimO	WOW	WOWs	SOW	AW	Hum
145	Proj	1.000								
153	NAnt	.246	1.000							
161	ChrO	.493	.603	1.000						
163	SimO	.459	.442	.624	1.000					
191	WOW	.373	.798	.724	.673	1.000				
199	WOWs	-.052	.474	.252	-.093	.472	1.000			
207	SOW	.376	.847	.753	.722	.888	.346	1.000		
220	AW	.476	.315	.367	.469	.413	.049	.340	1.000	
223	Hum	-.478	-.590	-.554	-.401	-.603	-.381	-.565	-.619	

TABLE 19 CONTINUED

		11	12	17	19	21	47	48	52	55	87	106	112	122	129	136
		MG	BG	CS	Ex	LSD	IT	IF	Mar	AWS	Ef	Pop	Cr	Weak	Dr	Com
11	MG	1.000														
12	BG	.061	1.000													
17	CS	.021	-.620	1.000												
19	Ex	.453	.344	-.466	1.000											
21	LSD	.239	-.427	.234	.305	1.000										
47	IT	.608	-.292	.289	.487	.570	1.000									
48	IF	-.134	-.493	.244	-.068	.302	.215	1.000								
52	Mar	.118	-.234	.114	.237	.258	.432	.251	1.000							
55	AWS	.680	-.433	.424	.302	.610	.883	.220	.343	1.000						
87	Ef	.080	.817	-.761	.486	.478	-.229	.407	-.102	-.417	1.000					
106	Pop	.290	.633	-.574	.605	-.192	.144	-.253	.046	-.047	.772	1.000				
112	Cr	.703	.293	-.139	.358	.052	.356	-.403	-.059	.419	.248	.304	1.000			
122	Weak	.159	-.549	.547	-.034	.399	.481	.419	.239	.523	-.524	-.178	-.240	1.000		
129	Dr	.267	-.475	.211	.298	.437	.626	.411	.376	.572	-.355	-.043	.032	.484	1.000	
136	Com	.115	.523	-.362	.122	-.248	-.254	-.538	-.205	-.279	.409	.311	.390	-.510	-.372	1.000
145	Proj	.321	.022	.026	.313	.167	.479	.107	.206	.417	.093	.168	.300	.173	.213	-.409
153	NAnt	.319	-.737	.677	-.095	.591	.646	.381	.273	.794	-.770	-.417	.073	.627	.599	-.478
161	ChrO	.447	-.343	.361	.283	.466	.701	.279	.346	.716	-.280	-.028	.215	.492	.471	-.446
163	SimO	.663	-.111	.058	.661	.404	.840	.105	.389	.726	.045	.361	.380	.425	.646	-.206
191	WOW	.567	-.498	.492	.233	.624	.817	.291	.356	.895	-.515	-.151	.302	.578	.598	-.313
199	WOWs	.102	-.439	.577	-.376	.293	.147	.102	-.058	.377	-.610	-.509	.024	.269	.009	-.115
207	SOW	.491	-.559	.533	.243	.686	.856	.370	.387	.890	-.558	-.150	.179	.674	.687	-.438
220	AW	.683	.028	.025	.306	.137	.494	-.156	.088	.620	.070	.162	.666	.042	.188	-.007
223	Hum	-.554	.288	-.369	-.068	-.331	-.537	-.110	-.150	-.703	.313	.157	-.374	-.311	-.238	.278

(Haertzen and Hill 1959; Wikler et al. 1965). The MMPI did show the effects of LSD (Belleville 1956) and opiate withdrawal (Haertzen and Hooks 1969; Martin et al. 1973*a*) in opiate addicts. The GZTS was not effective for showing alcohol effects (Haertzen and Miner 1965), whereas studies have shown that the empirical alcohol scale (6) of the ARCI measures alcohol effects (Bättig and Fischer 1965; Ehlers 1966; Sjöberg 1969). The ARCI was effective for showing alcohol withdrawal, but no comparisons with other tests with comparable groups are available. Watkins (1972) has found the AWS (55) Scale a useful measure of change in hypnosis in alcoholics. The Psychopath Scale (102) is resistive to chronic effects of heroin, morphine (Haertzen and Hooks 1969) and methadone (Martin et al. 1973*a*; Ottomanelli 1973), although it is predictive of arrests and work records of Ss on methadone maintenance (Ottomanelli 1973). Responses to sentence completion stems derived from the ARCI are predictive of sensitivity to treatment involving hypnosis of heroin effects (Haddox, Jacobson and Selden 1972).

The only extensive check on the relative effectiveness of various tests has been made on the comparison between no-drug and opiate withdrawal for six tests. The percent of items which differentiated these conditions at the .05 level for a replicated N of 28 was 29.5 (MMPI), 24.4 (CPI), 38.0 (Standard GZTS), 51.0 (revised GZTS), 51.1 (EPP), and 55.7 (ARCI). The ARCI was superior to all other tests for this purpose at an item level. The EPP was the poorest test. Furthermore, the revised GZTS was better than the standard form and attests to the relevance of item format (stress on current experience) that was emphasized as important for the measurement of immediate subjective experience (Haertzen and Miner 1965). Stress on past experience in the MMPI and enduring experience in the GZTS were regarded as reasons for the failure of these tests to show the immediate effects of some drugs.

A further sample of alcoholics during withdrawal is also needed to validate the Alcohol Withdrawal Scale (AW #220) which measures the relative differences in alcohol and opiate withdrawal. The simple effects of alcohol withdrawal have been cross-validated by the simple expedient of validating scales based on half the available samples. The effects of withdrawal are extremely strong as 273 (Scale 189) out of 550 items distinguished those alcoholics during withdrawal (Condition 85) from those not in withdrawal (Conditions 86, 87, 88). A question about scale 220 is raised because the effects of alcohol and opiate withdrawal are sufficiently similar to warrant the question of whether there is actual differentiation. Severity of alcohol or opiate withdrawal could not be directly controlled. Lack of control of severity of withdrawal could produce artifactual differences. There are differences between severe (Condition 154) and weak opiate withdrawal (Condition 168). The type of treatment could also have produced a distorting effect.

In validity studies more scales have been found to differentiate groups than would be expected from factor analyses.

Throughout the past years numerous studies have been reported in which adjective check lists have shown changes in immediate subjective experiences (Borgatta 1960; Cameron et al. 1967; Clyde 1960; Datel et al. 1969; Gough 1957; McNair and Lorr 1964; Nowlis and Green 1965; Zuckerman and Lubin 1965). The special virtue of the adjective check list like the short forms of the ARCI is that they can be quickly administered and scored and can be used for time action studies of drugs. The effectiveness of adjective check lists in drug studies is probably related to the use of "Today" instructions and the adaptability of instructions for "Today" vs. more usual experience. Their main handicap is the limitation of content. The lists have no explicit way of localizing some types of bodily symptoms, and the point of reference of adjectives is intrinsically more general. To the writer's knowledge no system of diagnosis of drug effects comparable to the one described here has been developed for the adjective check lists. That is, the studies have been generally concerned with the similarity or differences of experimental conditions under study rather than with conditions that were not included in the study. Diagnosis offers a broader perspective and dramatically points out problems of measurement. A study is now underway to compare the ARCI with the adjective check lists reported above using the simulation method. It would appear that single adjectives are more sensitive to simulation instructions than items in the form of sentences.

The simplest validity requirement of a scale in drug studies is that the scale should show the drug's effect as compared with placebo. This kind of validity is sought in studies in which it is necessary to show a drug effect (Sjöberg 1969). It is necessary to satisfy a somewhat higher validity requirement in order to obtain a potency estimate of the drug's and standard's acute effects which conforms to bioassay criteria of significant dose effects, parallelism of effects, and equivalence of intensity of effects at the doses chosen. The General Drug Effects Scale (#20 or 125) meets bioassay criteria in some investigations. Thus, potency estimates have been found between LSD and THC with GDE items (Isbell and Jasinski 1969). The satisfaction of the bioassay criteria on acute dose studies do not constitute the highest level of scale validity because the bioassay criteria can be met in the absence of intrinsic drug similarity; in the case of LSD and THC, cross tolerance was not found even though a good biossay was made with GDE. This type of validity is considered important because the correct diagnosis of drugs by the discriminant function method is contingent on the satisfaction of the assumption of equivalence of the intensity of some effect. A general measure of change in subjective experience such as GDE may be an important aid in achieving this objective. The most specific validity criterion is a correlation between the acute drug effect on a scale with a more intrinsic indicator of drug similarity such as cross-tolerance or antagonism (Haertzen 1974). For example, in chronic opiate studies, the capability of a drug to substitute for morphine is regarded as a more intrinsic indicator of drug similarity or that the drug is an opiate. GDE changes would not be considered a very accurate predictor of the type of drug under study according to the criterion of intrinsic similarity, because drugs which produce an elevation on GDE vary from those which can substitute for morphine to those which precipitate morphine abstinence symptoms. MBG would be considered more valid than GDE on the criterion of intrinsic similarity since drugs which substitute for morphine produce an elevation on MBG; whereas drugs which precipitate abstinence do not produce an MBG elevation (Martin 1967; Jasinski, Martin, and Hoeldtke 1971). Pupillary constriction would be considered good measure for the same reason. Active narcotic antagonists such as nalorphine and cyclazocine produce an elevation on PCAG and LSD scales (Martin 1967; Jasinski, Martin, and Hoeldtke 1971; Haertzen 1970) as well as the same ARCI items (Haertzen 1970). The specification of two scales is important as sedative-hypnotics produce effects on PCAG (Jasinski 1972) and drugs which are similar to LSD using the criterion of cross tolerance have similar effects on LSD type items (Rosenberg et al. 1964). The subjective effects of the stimulants, amphetamine, methamphetamine, ephedrine, phenmetrazine, and methylphenidate are similar (Martin et al. 1971).

While the primary validity of scales is thought of in terms of whether significant effects for a drug are demonstrable, validity of the total test is contingent on both the presence and the absence of effects of some drugs on particular scales or patterns of effects (Wikler 1964). Thus, the acute effects of amphetamine (Rosenberg et al. 1963) and THC acute effects are different in some respects from those for LSD and these drugs do not produce cross tolerance for LSD. The highest level of validity can be achieved only by using many scales because elevations on most scales can be produced by different types of drugs. As mentioned previously (see p. 36), the minimum number of scales might include: MBG, GDE, PCAG, Ex, LSD, Dr, ChrOp, and SOW.

The full evaluation of a drug typically should involve more than subjective report. The Addiction Research Center staff who frequently evaluate opiates typically do numerous multidisciplinary studies including evaluation of acute chronic, and withdrawal effects, substitution with known opiates, challenges with various drugs, etc. The variables include those on subjective reports (sample from the ARCI), observer and self-ratings on drug-related symptoms, plus a broad range of physiological and biochemical variables. These methods have been dealt with by Fraser et al. (1961), Martin (1967), and most recently by Jasinski (1971).

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APPENDIX TABLE 1

Appendix of ARCI Scales

Scale # 1, Re_1, Reactivity Scale # 1 (Haertzen 1965*b*)

True items: 8 9 13 22 67 80 86 96 97 125 147 156 157 179 187 188 201 211 218 227 236 237 243 247 248 253 280 281 286 287 294 304 306 309 330 331 338 341 360 365 366 378 387 395 399 405 406 418 420 425 428 432 461 464 465 483 484 487 488 494 495 503 520 521 527 529

Scale # 2, GDP, General Drug Predictor referred to previously as the Drug Estimation Scale (Haertzen 1965*a*)

True items: 17 19 45 51 87 119 121 133 140 145 175 176 185 188 191 192 200 212 214 223 224 231 240 241 271 297 305 308 315 334 335 338 349 350 352 363 372 392 393 394 402 404 405 419 424 433 445 467 477 498 508 513

Scale # 4, PCAG, Pentobarbital, Chlorpromazine, and Alcohol Group Variability Scale (Haertzen 1966*b*). See scale 452 for a Short Form.

True items: 11 54 66 70 76 86 111 157 166 179 194 219 226 238 276 285 287 288 298 314 318 332 406 413 452 463 475 479 491 511 513 526 528 538

False items: 10 41 190 257 333 384 429 438 459 470 481 536

Scale # 7, AG, Alcohol Group Variability (Haertzen 1966*b*).

True: 64 117 205 234 255 298 428 434 452 462

False: 60 116 250 257 272 344 369 456 490 510

Scale # 10, MBG, Morphine-Benzedrine Group Variability Scale (Haertzen, 1966*b*). See scale 453 for a Short Form.

True: 2 3 21 39 50 59 65 77 91 92 95 98 102 138 152 155 168 171 173 177 218 235 262 279 296 299 319 320 325 345 352 353 360 362 384 396 397 398 407 426 427 439 443 491 497 505 541

False: 206 242

Scale # 11, MG, Morphine Group Variability (Haertzen 1966*b*).

True: 21 36 55 63 71 81 92 129 178 186 196 208 221 230 313 342 352 371 391 397 426 431 439 441 443 457 497 506 519 541

Scale # 12, BG, Benzedrine Group Variability (Haertzen 1966*b*).

True: 10 41 48 50 59 95 101 137 152 155 171 180 189 190 235 262 264 272 322 329 362 384 414 548 550

False: 80 153 206 225 236 263 280 361 408 463 464 529 545

Scale # 15, Ma, Marijuana Group Variability (Haertzen 1966*b*).

True: 7 75 79 92 132 197 237 266 277 280 281 293 294 326 353 380 383 392 395 401 410 426 430 431 458 464 465 475 480 484 529 534 538 539

APPENDIX TABLE 1 CONTINUED

Scale # 17, CS, Chlorpromaxine Specific (Haertzen 1966b).

True: 9 11 20 54 66 70 75 76 86 105 166 206 257 288 364 413 425 448

False: 2 3 65 91 201 267 319 345 354 384 398 401 429 436 449 452 462 536 540

Scale # 19, Ex, Excitement Group Variability. This scale was developed along with other group variability scales, but it was not published (Haertzen 1966b).

True: 5 38 74 79 95 98 101 227 265 266 267 278 289 294 296 320 336 354 376 383 384 401 414 429 430 432 484 499 504 509 540

False: 66 70 76 123 166 219 359 528

Scale # 20, GDE$_1$, Factor Analytic General Drug Effect Scale (Haertzen 1962).

True: 3 8 9 13 54 75 76 79 80 86 91 92 95 97 101 102 105 114 117 138 147 152 156 157 164 179 187 201 218 223 225 227 236 243 247 263 265 266 267 277 279 280 281 287 289 293 294 296 299 304 306 309 325 326 336 341 345 353 359 360 361 362 365 366 375 376 383 387 395 398 399 401 405 408 412 425 426 428 430 439 444 450 452 464 465 475 483 484 495 496 499 503 504 520 524 529 534 539 540 541

Scale # 21, LS, LSD, LSD Drug Correction (Haertzen 1966b). See Scale 454 for a Short Form.

True: 6 29 96 160 164 201 209 265 267 278 376 389 390 400 410 429 432 499 539

False: 20 30 66 70 72 152 168 260 314 319 462 473 506

Scale # 29, Imp, Impulsive Factor Analytic (Haertzen 1965b)

True: 26 40 50 51 102 107 119 140 148 159 162 173 174 184 192 193 194 206 218 289 298 301 316 324 333 335 337 339 354 368 371 391 394 400 441 474 485 498 516

False: 7 23 24 67 89 128 178 179 237 242 297 402 413 512

Scale # 32, rSc, correlation with MMPI schizophrenia scale

True: 14 24 31 61 64 65 67 68 83 156 175 203 224 249 252 256 269 309 313 316 328 340 343 349 382 404 409 427 428 471 499 503

False: 28 111 141 167 210 270 283 291 299 373 380 417 437 451 476 501 531 542 543 546

Scale # 33, rSy, correlation with sociability scale of CPI

True: 28 43 55 71 80 89 94 103 123 172 183 194 202 240 255 307 310 332 344 440 469 501 544

APPENDIX TABLE 1 CONTINUED

rSy continued

False: 35 58 104 120 143 165 168 208 232 241 269 312 404 405 433 547

Scale # 35, rT, correlation with Thoughtful scale of GZTS

True: 10 17 45 118 128 145 149 171 215 254 295 329 342 352 408 410 422 481

False: 3 4 60 69 90 108 151 164 190 213 275 290 310 331 379 380 415 489 509 532 543

Scale # 37, Im_2 of ARCI (Haertzen, 1965a), correlation with Immaturity scale # 26

True: 12 44 61 125 129 163 177 181 216 249 250 273 354 370 403 409 428 468 501

False: 80 89 133 144 153 214 245 283 288 298 300 310 356 368 393 417 419 440 456 467 486 508 526 531

Scale # 41, rG, correlation with General Activity scale of GZTS

True: 6 29 38 57 92 103 109 118 145 148 149 173 229 271 370 492

False: 4 20 21 34 62 74 95 112 161 205 226 244 344 355 376 405 434 435 444 448 478 502 527

Scale # 42, rCm, correlation with the Communality scale of the CPI

True: 17 44 85 116 140 165 166 200 220 258 274 283 301 329 367 370 408 453 501 510 513 518

False: 2 34 78 96 117 131 163 174 197 221 310 328 338 386 406 416 421 439 441 509 527

Scale # 47, IT, Infrequent True (Haertzen and Hooks 1968)

True: 5 7 8 9 13 24 25 32 35 66 67 70 75 76 79 83 86 91 93 95 96 97 105 111 112 113 114 117 125 132 136 147 156 160 164 165 166 169 179 182 185 187 201 209 218 227 240 242 243 248 249 252 253 263 265 266 267 268 269 276 277 278 279 280 285 286 287 288 289 290 293 294 297 298 299 300

Scale # 48, IF, Infrequent False (Haertzen and Hooks 1968)

False: 16 23 37 45 49 62 78 82 89 108 118 124 126 130 131 141 144 146 167 190 191 233 250 257 258 259 270 283 291

Scale # 49, SU, Social Undesirability (Haertzen and Hooks 1968); the score is equal to the score for infrequent true (scale 47) plus the score for infrequent false (scale 48).

True: 5 7 8 9 13 24 25 32 35 66 67 70 75 76 79 83 86 91 93 95 96 97 105 111 112 113 114 117 125 132 136 147 156 160 164 165 166 169 179 182 185 187 201 209 218 227 240 242 243 248 249 252 253 263 265 266 267 268 269 276 277 278 279 280 285 286 287 288 289 290 293 294 297 298 299 300

APPENDIX TABLE 1 CONTINUED

Scale # 49 continued

False: 16 23 37 45 49 62 78 82 89 108 118 124 126 130 131 141 144 146 167 190 191 233 250 257 258 259 270 283 291

Scale # 50, RS, Response Set (Haertzen and Hooks 1968); the score is equal to the score for infrequent true (scale 47) plus 29 minus the infrequent false score (scale 48)

True: 5 7 8 9 13 24 25 32 35 66 67 70 75 76 79 83 86 91 93 95 96 97 105 111 112 113 114 117 125 132 136 147 156 160 164 165 166 169 179 182 185 187 201 209 218 227 240 242 243 248 249 252 253 263 265 266 267 268 269 276 277 278 279 280 285 286 287 288 289 290 293 294 297 298 299 300 16 23 37 45 49 62 78 82 89 108 118 124 126 130 131 141 144 146 167 190 191 233 250 257 258 259 270 283 291

Scale # 52, Mar, Marijuana, a revision of scale # 15, Ma (Haertzen 1966b) and presented by Jasinski, Haertzen, and Isbell (1971)

True: 7 75 92 132 197 222 237 266 280 293 294 353 380 387 395 458 475 484 529 534 538 539

False: 11 31 38 66 96 107 110 141 143 146 160 189 193 201 209 376 401 439

Scale # 55, AWS, Alcohol Withdrawal Specific (Sharp, Fuller, and Haertzen 1967)

True: 5 6 7 9 11 18 29 34 60 64 70 79 80 86 87 96 97 104 105 111 112 113 120 121 139 140 150 153 156 157 160 162 165 166 169 182 186 196 209 211 213 219 224 225 263 269 280 281 282 283 285 287 298 300 305 306 316 321 330 336 341 350 359 365 366 375 392 397 410 427 432 442 463 464 469 471 472 475 477 478 479 480 482 483 484 496 503 513 520 521 528 529 538 539 544 545

False: 2 3 20 30 84 101 102 123 124 144 220 319 384 491 548

Scale # 56, Mas, Masculinity

True: 10 82 109 134 142 144 184 216 310 403 409

False: 1 14 25 56 58 88 93 120 136 137 176 208 218 256 265 285 340 343 383 420 432 452 455 484 521 547

Scale # 87, Ef_3, Efficiency revision of scale # 22, Ef (Haertzen 1965a)

True: 2 3 20 30 59 72 91 95 101 102 138 152 168 180 189 190 235 262 296 299 319 325 345 348 360 362 383 384 396 407 459 476 491 504 505 509 517 536 548

False: 9 66 70 76 86 160 166 182 201 209 236 390 408 452 528 545

APPENDIX TABLE 1 CONTINUED

Scale # 101, Re$_2$, Reactivity, lenghtened revision of scale # 1, Re (Haertzen 1965a)

True: 5 6 7 8 9 11 13 19 29 54 67 70 73 79 80 86 96 97 100 104 105 107 111 112 120 121 125 140 143 147 153 156 157 160 164 166 169 179 182 187 196 201 206 209 211 213 224 229 236 241 248 263 266 269 271 277 278 280 281 282 285 287 288 289 294 297 298 300 304 306 308 313 320 321 328 330 336 338 341 350 351 352 359 361 365 366 375 378 387 389 390 391 399 404 406 408 410 418 428 432 442 448 458 461 463 464 465 471 472 475 477 479 480 482 483 484 487 488 496 499 503 512 513 520 521 524 527 528 529 534 537 538 539 541 544 545

False: 20 23 30 49 62 72 84 124 144 220 275 344 536 548

Scale # 102, Pyp$_2$, Psychopath scale # 2, revision of scale # 60, Pyp$_1$ (Haertzen and Panton 1967)

True: 17 28 36 41 47 52 53 61 78 85 89 103 108 118 134 135 142 149 154 159 163 174 193 202 205 215 230 238 258 292 310 333 335 347 368 385 393 451 486 493 501 508 516 525 533

False: 25 44 65 93 117 136 148 165 181 197 198 250 274 299 311 340 343 370 373 414 420 455 466 468 517 535

Scale # 106, Pop, Popularity

True: 2 3 4 39 44 48 59 77 90 93 101 102 117 152 168 171 180 189 197 198 232 261 262 273 274 296 299 319 325 340 343 345 354 357 360 362 370 384 396 414 421 429 468 505 509 550

False: 52 108 133 134 142 191 193 202 310 356 393 451 501 502

Scale # 108, SoW, Social Withdrawal

True: 23 24 122 127 132 138 161 163 184 185 200 217 226 234 242 246 252 255 315 339 372 381 395 401 411 416 419 460 489 510 531 535

False: 6 42 48 121 129 146 183 196 207 230 233 259 260 291 342 371 434 436 437 454 497 506 507 508 516 519 533

Scale # 111, Con, Self-Control, a revision of Patience-Impatience Scale # 23 (Haertzen 1965a)

True: 1 4 10 39 44 48 69 77 90 114 151 167 171 178 186 189 192 195 235 247 322 409 422 469 495 500 537 543

False: 26 27 28 33 37 79 83 106 119 133 141 142 145 170 202 225 236 245 250 259 335 369 393 401 417 423 440 450 474 502 507 515

Scale # 112, Cr, Critical

True: 43 46 47 57 58 64 87 94 106 113 115 123 131 139 141 145 146 150 177 183 188 208 220 254 259 272 273 303 317 329 337 342 348 358 374 382 420 437 440 441 459 473 474 481 530 532 546 547

APPENDIX TABLE 1 CONTINUED

Scale # 112 continued

False: 35 51 98 102 162 172 286 383 390 424 435 486

Scale # 115, Taste

True: 75 76 266 353 364 380 401 413 425 426 496 541

Scale # 122, Weak

True: 9 11 70 80 86 102 105 111 162 166 178 185 286 288 390 424 431 434 537

False: 32 37 58 64 94 144 220 290 329 348 356 382 417 440 444 474 476 481 491 536 546

Scale # 123, Tir, Tired

True: 20 66 70 76 166 219 314 413 511 514 528

False: 10 95 190 378 429 430

Scale # 125, GDE$_3$, General Drug Effect No. 3, revision of Mean Drug Effect Scale # 51 (Haertzen 1963a).

True: 27 66 75 76 79 91 133 225 227 266 267 277 279 353 361 364 372 380 401 413 423 425 426 430 452 462 475 496 502 528 540 541

False: 1 4 10 18 39 48 69 81 90 110 171 178 186 189 190 195 237 257 262 283 322 328 403 422 476 500 543 548

Scale # 127, Mal$_2$, Maladjustment

True: 44 45 60 77 90 110 122 165 199 214 230 244 269 334 360 369 374 438 466 469 478 500 501 523 543

False: 15 17 27 31 36 38 57 63 71 81 85 87 95 99 149 170 173 212 216 228 261 264 271 284 300 326 355 385 403 406 435 445 449 493 526

Scale # 129, Dr, Drunk

True: 76 330 354 361 381 401 428 452 462 475 494 528 540 542

False: 1 10 62 81 189 190 195 257 283 476 500

Scale # 136, Com, competitive and alert vs passivity, indifference, uncoordinated

True: 19 39 43 64 69 74 90 113 115 123 126 146 177 183 190 220 254 257 300 342 348 371 388 409 415 437 440 454 459 467 470 506 508 542 546 547 548

False: 51 86 138 161 162 170 185 212 219 225 226 236 255 383 395 411 417 433 435 450 460 502 531

APPENDIX TABLE 1 CONTINUED

Scale # 143, Int, Interests

True: 1 14 41 49 50 56 78 81 82 88 103 128 136 137 155 180 199 215 235 270 303 318 348 367 443 449 459 466 474 500

Scale # 145, Proj, Projection

True: 14 15 38 49 53 85 88 116 135 151 161 163 185 192 195 203 204 212 226 238 242 246 309 318 326 344 349 355 385 394 395 411 416 419 445 446 447 449 489 526 531

False: 42 109 129 141 183 251 259 334 371 415 427 434 436 437 440 506 507 516 542

Scale # 153, NAnt, Narcotic Antagonist (Haertzen 1970)

True: 54 66 70 73 76 80 86 113 140 153 156 164 182 201 219 225 263 267 359 361 387 408 452 462 463 464 475 482 503 513 528 537 545

False: 2 3 21 30 72 91 98 102 168 190 257 283 319 325 337 384 396 407 439 457 536 548

Scale # 161, ChrO, Chronic Opiate (data from Haertzen and Hooks 1969)

True: 26 55 75 111 150 215 255 288 296 298 351 353 408 413 433 450 461 469 539

False: 126 129 275 337 400 470 546

Scale # 163, SimO, Simulated Opiate

True: 5 11 13 55 65 66 76 79 91 92 98 101 102 138 218 243 266 267 276 278 279 287 288 299 320 325 336 345 353 362 365 376 380 398 401 412 413 418 425 426 430 431 439 457 458 463 464 469 475 499 503 504 511 524 540 541 545

False: 190 356 476

Scale # 191, WOW, Weak Opiate Withdrawal (Haertzen, Meketon, and Hooks 1970)

True: 9 11 12 22 55 75 76 79 105 115 125 150 156 166 177 186 200 211 216 221 255 267 269 278 288 302 311 320 340 349 356 371 378 390 395 408 410 418 421 431 432 433 449 463 464 479 480 482 484 487 493 511 527 528 537 539 540 545

False: 2 3 35 59 62 72 100 101 124 135 152 210 222 235 270 296 312 313 319 384 491 505 515 531 536 546

Scale # 194, Most significant weak opiate withdrawal items

True: 11 12 55 79 125 156 166 221 378 410 432 433 463 479 527 539

False: 2 3 101 135 152

APPENDIX TABLE 1 CONTINUED

Scale # 199, WOWs, Most significant weak opiate withdrawal items plus suppressor items

True: 11 12 18 55 79 125 156 166 221 257 283 378 410 432 433 463 479 527 539

False: 2 3 91 101 135 152 197 209 243 294 380 387 426 430 494 504

Scale # 207, SOW, Severe Opiate Withdrawal (Haertzen, Meketon, and Hooks 1970)

True: 5 9 29 55 66 70 75 76 79 86 105 111 117 132 160 166 182 201 209 225 226 238 248 263 266 267 278 284 285 287 288 289 294 298 300 361 375 378 387 390 408 410 413 424 432 433 450 463 469 479 499 503 511 524 528 538 541 545

False: 2 4 20 30 39 62 65 72 126 190 220 254 258 260 275 283 344 356 384 470 491 536

Scale # 208, SOW items from SQ_4 (Haertzen, Meketon, and Hooks 1970)

True: 551 552 555 564 566 571 573 578 580 582 584 586 590 591 592 593 597 598 599

False: 557 561 588 595

Scale # 220, AW, Alcohol withdrawal greater than severe and weak opiate withdrawal

True: 3 11 17 21 34 35 40 46 54 62 64 80 96 97 98 104 105 108 120 121 127 135 139 140 145 153 161 170 175 182 185 202 204 217 244 246 281 286 292 301 305 312 314 318 336 338 341 353 355 365 366 377 380 385 397 419 425 427 428 441 443 456 471 472 478 489 510 512 515 520 521 531 532 544 546

False: 5 8 9 12 13 29 55 66 84 86 102 111 117 160 166 171 226 242 257 266 267 276 294 296 298 309 323 340 378 390 424 430 432 433 439 450 460 479 494 499 511 548

Scale # 223, Hum, Sense of Humor

True: 91 101 123 167 259 345 354 533

False: 17 18 89 120 145 159 222 263 305 312 339 351 359 394 427 443 489 490 500 512 513 537

Scale # 445, DSE, Drug Simulation Effect Scale: Comprised of items which show the highest combined difference between simulated opiate vs actual morphine, pep pills vs benzedrine, goofballs vs pentobarbital, alcohol vs alcohol, marijuana vs pyrahexyl, and cocaine vs LSD

True: 5 7 8 13 19 24 27 32 64 67 73 95 102 113 114 125 138 187 229 237 243 252 253 278 286 287 293 298 299 302 304 306 308 325 336 345 362 383 395 398 399 406 410 412 418 426 445 447 465 472 488 494 495 503 520 524 529 539

False: 23 62 89 124 128 318 356 423 456 476 501

Scale 452 Short Form of PCAG Scale # 4 (Jasinski, Martin, and Sapira 1968a)

True: 11 54 66 76 86 166 219 452 463 475 513

False: 190 265 (not in scale # 4) 384 429

Scale 453 Short Form of MBG Scale # 10 (Jasinski, Martin, and Sapira 1968a)

True: 2 3 77 91 98 102 168 190 (not in MBG # 10) 218 279 319 325 345 384 396 407

False: none

Scale 454 Short Form of LSD Scale # 21 (Jasinski, Martin, and Sapira 1968a)

True: 96 160 164 201 209 265 267 278 390 499

False: 30 66 72 319

APPENDIX TABLE 2

MEAN UNCORRECTED T-SCORES

CONDITION NO.	00 + 91	01 + 150	14	15	16	17	18	19	20	21	22	22 + 24
N	342	257	31	30	18	18	18	17	147	15	28	57
Scale No.	No Drug	Pla	No Drug	Pla	MS 15 mg/ 70 kg	MS 30 mg/ 70 kg	Pent 125 mg/ 70 kg	Pent 250 mg/ 70 kg	MS 20 mg	MS 10 mg	Cyc .6 mg/ 70 kg	Ave of 22 & 24
101 Re	42.86	42.69	42.24	43.75	46.53	46.66	45.37	47.81	46.84	43.60	49.74	50.89
2 GDP	49.45	49.11	51.02	51.38	53.02	56.01	54.91	56.55	52.15	47.27	54.01	54.01
102 Pyp	68.21	68.26	70.16	68.18	67.92	71.30	70.78	70.02	68.32	64.13	68.00	67.54
10 MBG	43.28	41.58	46.66	46.82	56.27	56.80	49.04	52.99	57.02	49.09	48.22	46.22
108 SoW	54.08	54.62	52.89	53.80	48.84	51.82	54.78	53.33	52.48	51.53	56.86	56.91
111 Con	38.04	36.39	40.19	39.00	40.85	38.70	34.76	39.11	38.81	35.20	37.30	36.30
127 Mal	48.13	49.60	48.47	45.04	46.30	46.09	47.04	45.16	48.78	51.47	48.02	48.28
125 GDE	51.04	54.59	48.39	53.24	57.14	58.95	56.79	59.38	63.78	65.42	66.37	69.21
123 Tir	47.32	49.37	46.21	50.99	53.21	52.53	58.41	59.18	53.52	50.72	58.96	60.36
29 Imp	50.15	49.16	53.04	52.33	53.46	57.02	56.82	57.16	52.66	49.58	53.59	52.82
143 Int	54.06	53.23	56.57	55.41	59.89	60.59	59.07	58.75	56.78	54.48	58.69	56.87
115 Taste	45.62	47.75	45.27	52.01	58.57	59.49	52.07	57.84	61.84	62.02	60.80	62.53
4 PCAG	43.41	44.46	41.79	45.92	49.05	48.38	50.96	53.03	48.55	44.89	53.60	55.01
7 AG	45.35	44.90	45.97	46.19	45.71	45.71	46.25	48.67	45.87	42.45	49.66	50.93
11 MG	44.85	44.02	46.05	47.04	54.79	53.88	50.42	52.46	55.43	48.59	47.91	48.69
12 BG	51.38	49.22	55.31	54.17	53.93	52.72	50.20	50.69	50.81	47.36	45.98	43.84
17 CS	50.59	52.54	47.67	49.74	45.62	44.62	53.74	51.77	45.21	46.00	53.02	53.97
19 Ex	44.60	43.11	45.59	46.39	54.18	53.02	43.00	46.05	54.08	48.71	47.73	46.34
21 LSD	46.64	46.76	43.54	44.79	44.85	45.18	42.08	43.85	47.82	48.32	49.03	50.97
47 IT	42.03	42.32	40.43	42.54	45.75	46.23	44.90	45.14	48.60	44.39	50.40	50.84
48 IF	41.98	42.60	40.72	42.12	41.74	39.49	42.09	41.52	41.74	41.60	44.78	45.83
52 Mar	48.76	48.37	47.33	49.61	49.34	47.64	45.05	45.47	49.46	52.17	51.01	52.94
55 AWS	44.43	44.42	43.72	45.01	47.36	47.20	47.03	49.85	47.15	45.19	50.43	51.65
87 Ef	48.91	46.84	52.46	50.28	53.07	52.75	48.10	49.36	51.75	48.75	45.23	42.31
106 Pop	35.24	33.05	38.96	38.43	44.44	42.22	38.17	40.70	42.12	37.27	37.62	36.22
112 Cr	50.47	48.89	52.26	50.99	54.96	54.79	54.37	54.56	52.46	46.07	51.08	50.27
122 Weak	40.31	41.30	38.52	40.84	43.15	41.02	42.29	44.36	45.57	43.45	44.69	46.51
129 Dr	46.60	48.95	44.95	48.13	51.05	53.14	52.91	55.55	56.64	56.33	60.53	63.05
136 Com	45.47	45.16	46.63	44.06	47.58	46.52	41.35	43.22	47.12	44.50	41.91	40.03
145 Proj	55.14	54.67	55.88	58.01	55.60	59.15	60.24	60.17	54.90	52.86	60.09	59.15
153 NAnt	47.30	48.86	45.25	47.49	46.17	47.26	51.06	53.35	45.97	45.40	57.30	60.48
161 ChrC	46.36	46.59	44.91	48.35	48.79	49.88	47.51	50.43	50.95	47.36	53.14	53.61
163 SimO	40.50	41.12	40.17	44.90	56.27	56.27	49.25	54.36	57.87	51.43	52.74	53.77
191 WOW	45.37	46.40	42.71	45.83	48.36	47.54	50.02	51.06	48.82	45.58	52.87	54.68
199 WOWa	49.90	49.56	45.90	46.00	45.97	45.78	49.30	48.57	43.17	44.00	47.33	47.94
207 SOW	44.38	45.08	42.21	45.17	47.39	47.61	47.39	50.38	49.78	46.84	53.55	55.44
220 AW	52.29	51.83	54.75	51.81	56.97	57.49	57.35	59.92	52.90	52.85	55.11	55.21
223 Hum	47.75	47.78	47.70	48.37	46.47	45.78	43.58	42.62	48.89	49.51	46.20	45.33

00 + 91 no-drug; 01 + 150 placebo; 14 no-drug; 15 placebo; 16 morphine-15 mg/70 kg; 17 morphine-30 mg/70 kg; 18 pentobarbital-125 mg/70 kg; 19 pentobarbital-250 mg/70 kg; 20 morphine-20 mg; 21 morphine-10 mg; 22 cyclazocine-.6 mg/70 kg; 22 + 24 average of condition 22 and 24.

APPENDIX TABLE 2 (CONTINUED)

MEAN UNCORRECTED T-SCORES

CONDITION NO.	23	23 + 25	24	25	26	26 + 27	27	28	29	30	31	37
N	30	58	29	28	89	198	109	219	36	189	30	4
Scale No.	Cyc 1.2 mg/ 70 kg	Ave of 23 & 25	Nal 16 mg/ 70 kg	Nal 32 mg/ 70 kg	MI Males	Ave of 26 & 27	MI Females	Norm	Norm	Pent 200 mg	Pent 250 mg	MS 20 mg
101 Re	57.41	57.29	52.00	57.15	46.17	48.19	49.85	50.86	51.91	46.11	47.29	39.40
2 GDP	55.50	55.40	54.03	55.33	47.21	48.49	49.55	49.36	51.05	51.73	51.25	43.47
102 Pyp	66.05	65.33	67.11	64.57	42.11	38.60	35.73	43.62	46.89	67.57	66.57	64.02
10 MBG	46.20	45.46	44.30	44.69	50.75	51.59	52.28	49.61	54.47	45.73	49.50	47.94
108 SoW	61.33	59.91	56.97	58.39	59.53	60.89	61.99	45.51	44.19	56.90	57.72	54.38
111 Con	32.59	33.30	35.31	34.03	50.50	50.09	49.75	43.25	46.96	35.29	35.43	43.85
127 Mal	48.04	48.97	48.55	49.98	57.59	57.55	57.51	34.57	30.62	48.78	47.41	47.94
125 GDE	83.08	83.10	71.92	83.14	49.76	50.96	51.94	53.20	50.45	62.81	69.09	53.34
123 Tir	64.71	65.77	61.70	66.95	48.73	50.04	51.12	51.60	50.72	56.73	59.81	47.33
29 Imp	51.89	51.78	52.05	51.63	47.87	48.02	48.15	50.04	51.23	50.66	53.98	43.59
143 Int	54.35	52.62	55.09	50.76	48.37	50.74	52.68	47.95	51.01	53.19	52.66	54.84
115 Taste	70.18	71.21	64.21	72.31	47.99	49.83	51.33	50.78	53.78	54.18	59.43	51.46
4 PCAG	61.41	62.68	56.38	64.04	48.18	49.55	50.67	51.93	51.58	51.17	53.61	37.92
7 AG	56.44	56.03	52.16	55.58	46.71	46.84	46.94	52.17	52.62	47.59	50.91	34.32
11 MG	47.99	48.91	49.44	49.92	43.74	45.22	46.42	51.13	54.17	46.12	47.73	45.17
12 BG	36.54	35.91	41.78	35.24	50.27	49.82	49.64	47.99	52.26	46.78	47.23	53.48
17 CS	54.36	56.41	54.90	58.61	47.77	48.64	49.36	49.51	46.69	52.97	50.44	43.77
19 Ex	49.64	48.87	44.99	48.12	49.41	49.97	50.44	49.92	53.61	44.93	47.16	48.66
21 LSD	58.04	58.36	52.83	58.71	46.65	47.94	48.97	50.41	49.18	45.88	45.38	42.73
47 IT	58.82	58.38	51.25	57.91	48.03	50.15	51.87	51.12	51.49	46.53	47.98	41.00
48 IF	49.41	50.08	46.85	50.80	52.51	53.21	53.78	53.82	53.54	45.03	47.64	37.75
52 Mar	56.19	55.42	54.80	54.61	52.01	52.38	52.52	49.61	48.80	49.77	50.50	46.44
55 AWS	57.19	57.41	52.85	57.65	46.14	48.15	49.80	50.13	51.07	47.20	47.64	38.89
87 Ef	37.45	36.78	39.47	36.03	52.75	52.41	52.13	48.76	53.19	45.76	46.38	53.43
106 Pop	35.11	34.48	34.87	33.82	54.23	55.67	56.84	52.63	55.61	35.78	38.60	42.45
112 Cr	48.37	48.43	49.47	48.49	46.78	46.31	45.93	52.62	54.87	50.38	49.38	44.04
122 Weak	53.24	53.39	48.28	53.54	49.19	50.96	52.40	47.67	48.13	46.16	48.43	38.64
129 Dr	76.77	74.81	65.48	72.76	49.43	48.99	48.63	51.53	50.13	58.71	68.72	46.53
136 Com	34.76	34.10	38.25	33.39	45.33	42.60	40.36	52.83	54.57	41.85	41.79	51.51
145 Proj	61.21	60.06	58.25	58.83	52.97	55.14	56.91	49.45	52.10	57.04	57.18	53.18
153 NAnt	70.73	70.66	63.53	70.58	47.05	48.74	50.13	51.03	48.64	52.66	53.35	39.54
161 ChrO	59.43	58.15	54.07	56.78	50.07	51.23	52.19	48.54	48.88	50.19	50.33	43.85
163 SimO	63.19	62.86	54.77	62.50	49.72	51.07	52.16	49.80	53.46	49.53	54.80	44.36
191 WOW	61.85	61.60	56.42	61.32	46.17	47.80	49.13	51.29	51.78	50.11	50.81	38.30
199 WOWs	45.14	46.76	48.51	48.48	47.43	47.11	46.86	50.13	46.92	48.00	45.14	42.35
207 SOW	63.46	63.75	57.26	64.07	47.53	49.00	50.21	50.35	50.52	50.44	51.75	39.53
220 AW	55.23	54.64	55.33	54.00	46.49	48.40	49.95	48.09	50.53	51.67	51.72	50.05
223 Hum	42.69	43.31	44.47	44.00	52.86	50.94	49.36	52.39	52.02	47.80	49.11	56.96

23 cyclazocine-1.2 mg/70 kg; 23 + 25 average of condition 23 and 25; 24 nalorphine-16 mg/70 kg; 25 nalorphine-32 mg/70 kg; 26 mentally ill, males; 26 + 27 mentally ill, conditions 26 and 27; 27 mentally ill, females; 28 normal college students, males and females combined; 29 normal college students (by Grupp); 30 pentobarbital, 200 mg; 31 pentobarbital, 250 mg; 37 morphine-20 mg.

APPENDIX TABLE 2 (CONTINUED)

MEAN UNCORRECTED T-SCORES

CONDITION NO.	39	40	42	43	45	45 + 46	46	47	48	50	51	60
N	4	173	4	13	19	38	19	5	5	49	172	209
Scale No.	MS Day 5 Withd	Cpz	MS Day 19 Kick	Schiz	Scop 5 mcg/kg	Ave of 45 & 46	Scop 7.5 mcg/kg	Her Day 4	Her Day 21	LSD 1 mcg/kg	LSD 1.5 mcg/kg	Amph 30 mg
101 Re	41.78	46.30	44.60	49.36	52.68	54.30	55.91	46.50	51.55	49.96	52.28	43.98
2 GDP	44.78	50.49	45.43	49.57	55.51	57.03	58.55	50.42	53.04	52.18	51.30	50.96'
102 Pyp	63.64	68.56	64.02	43.06	67.39	70.51	73.64	66.15	63.72	66.29	67.48	67.78
10 MBG	47.60	41.84	43.18	56.11	49.28	49.92	50.56	54.52	45.83	49.90	46.03	55.84
108 SoW	57.06	55.74	61.96	62.74	58.52	58.98	59.45	53.67	56.88	56.59	56.56	54.74
111 Con	47.28	34.08	40.99	55.24	39.54	37.14	34.72	36.87	37.78	37.21	31.72	38.58
127 Mal	46.99	48.68	46.03	54.73	45.71	43.95	42.20	43.08	46.13	47.33	47.96	47.54
125 GDE	47.74	63.13	52.32	49.47	72.63	75.10	77.57	56.30	65.68	66.88	72.17	60.99
123 Tir	47.33	60.42	53.44	48.11	64.79	66.62	68.41	51.81	59.95	52.36	49.20	46.17
29 Imp	40.84	50.05	43.59	47.25	51.78	54.10	56.41	52.38	46.52	52.42	51.30	52.20
143 Int	57.48	52.35	58.01	52.64	55.11	56.23	57.33	47.87	44.91	53.21	52.45	56.87
115 Taste	45.90	56.97	47.29	50.39	73.85	77.22	80.58	50.90	58.69	60.60	61.84	60.09
4 PCAG	43.94	53.97	47.82	48.14	58.55	59.91	61.27	49.71	56.93	51.17	49.86	43.86
7 AG	44.08	46.76	48.96	48.21	52.04	54.74	57.44	47.01	50.91	51.85	49.73	44.69
11 MG	41.65	44.73	40.64	47.42	51.57	52.48	53.38	51.01	50.20	48.35	45.85	48.43
12 BG	54.84	45.07	51.21	53.30	43.59	42.77	41.96	51.21	44.69	46.74	43.55	56.88
17 CS	53.38	62.82	57.87	45.54	58.74	59.15	59.56	47.36	58.13	48.90	48.85	44.74
19 Ex	41.56	40.02	37.69	56.35	48.01	49.02	50,05	56.27	54.21	57.33	61.69	57.77
21 LSD	44.94	47.53	49.35	48.26	54.42	54.42	54.42	47.73	52.44	58.80	68.72	47.85
47 IT	44.27	46.98	45.90	54.08	53.75	55.73	57.71	48.02	50.63	52.54	54.09	46.87
48 IF	38.53	43.70	44.00	51.32	49.83	47.53	45.23	44.93	49.93	46.90	45.80	41.93
52 Mar	49.34	48.99	48.37	51.12	58.09	58.90	59.71	52.44	51.66	48.88	49.11	49.69
55 AWS	43.10	47.92	47.61	49.43	53.90	55.58	57.26	46.80	52.33	49.71	51.79	44.04
87 Ef	49.53	42.99	43.12	55.15	42.81	42.23	41.64	53.88	41.61	46.94	43.06	55.07
106 Pop	39.13	32.53	37.47	57.61	37.18	35.98	34.80	43.91	36.47	39.13	36.50	43.28
112 Cr	41.78	49.13	43.28	47.95	47.30	49.29	51.27	46.97	46.37	48.83	48.31	51.24
122 Weak	48.13	48.63	51.92	47.88	52.83	52.28	51.75	42.44	53.57	49.52	49.01	43.37
129 Dr	43.41	55.25	50.70	52.23	64.37	65.68	67.01	53.83	61.34	62.00	65.15	53.51
136 Com	43.28	41.66	39.41	49.61	38.03	36.76	35.48	43.86	33.79	41.93	41.06	47.70
145 Proj	59.40	55.88	61.62	56.02	63.03	62.97	62.94	54.16	54.16	57.64	55.79	55.33
153 NAnt	43.62	54.64	51.78	47.36	59.96	62.28	64.60	44.31	55.16	53.33	56.51	43.00
161 ChrO	53.73	51.92	52.90	50.94	55.29	57.54	59.79	61.63	69.53	52.85	52.79	50.26
163 SimO	43.70	47.33	41.37	54.86	58.29	60.14	62.00	54.36	56.75	56.37	56.34	53.46
191 WOW	48.26	51.67	49.19	51.73	56.30	58.95	61.60	52.30	60.02	53.45	54.86	45.37
199 WOWs	55.84	52.03	52.67	51.46	49.65	50.32	50.98	50.13	58.38	44.70	46.35	41.65
207 SOW	46.93	51.66	51.62	48.70	58.71	59.77	60.84	48.56	58.04	54.32	57.57	46.54
220 AW	44.05	50.63	45.05	48.39	55.27	57.71	60.17	47.85	45.72	50.61	50.97	52.41
223 Hum	53.26	47.16	47.09	53.21	42.37	41.61	40.82	53.14	48.69	49.51	50.00	50.44

39 Opiate withdrawal-5th day of dose reduction; 40 Chlorpromazine-Day 1; 25 mg qid; Day 2, 50 mg qid; Day 3, 75 mg; 42 Morphine, 19th day after dose reduction; 43 Schizophrenics; 45 Scopolamine-5 mcg/kg; 45 + 46 Average of 45 and 46; 46 Scopolamine-7.5 mcg/kg; 47 Heroin-4th day of chronic administration; 48 Heroin-Day 21 on chronic administration; 50 LSD-1 mcg/kg; 51 LSD-1.5 mcg/kg; 60 Amphetamine, Benzedrine, 30 mg.

APPENDIX TABLE 2 (CONTINUED)

MEAN UNCORRECTED T-SCORES

CONDITION NO.	61	70	71	80	81	82	83	85	86 + 87 + 88	89	90	91
N	30	44	170	75	90	31	66	49	148	15	18	22
Scale No.	Amph 15 mg	Py 60 mg	Py 90 mg	Alc 2.12 of 30% Alc/ Kg	Alc 3	Alc 4.43	Alc 1.1	Alco Day 2 Withd	Alco Weeks 1, 2, 3	Norm Male	Norm Female	No Drug
101 Re	44.21	44.25	45.59	45.27	46.99	49.90	43.91	66.44	50.52	44.27	48.06	45.07
2 GDP	49.90	49.07	49.66	48.70	50.41	52.07	49.25	58.84	49.33	43.86	46.97	51.76
102 Pyp	67.17	65.90	66.28	66.26	65.91	66.72	66.75	51.51	47.43	46.56	45.92	66.99
10 MBG	48.78	45.22	44.49	46.09	47.41	45.82	46.40	53.15	52.31	43.21	43.67	46.79
108 SoW	54.92	56.90	57.40	56.36	56.75	59.04	55.42	44.31	40.54	49.63	47.06	54.63
111 Con	37.85	38.90	33.76	35.95	33.64	31.47	33.25	45.84	49.77	43.89	39.20	37.23
127 Mal	47.71	50.53	49.07	48.63	47.27	46.07	47.98	56.90	60.43	36.84	33.58	47.56
125 GDE	59.50	60.26	67.19	67.23	72.49	76.35	65.07	63.50	48.82	48.14	55.89	52.00
123 Tir	45.02	52.79	54.35	56.31	57.10	62.23	52.02	60.33	48.76	48.55	53.21	47.70
29 Imp	51.34	48.79	48.86	50.93	51.94	48.79	50.88	57.99	52.13	45.66	50.31	55.66
143 Int	54.27	52.05	51.56	51.94	51.48	53.72	53.09	49.34	46.98	45.90	46.98	55.41
115 Taste	57.20	56.38	58.82	55.72	57.45	62.49	53.82	65.02	48.94	44.60	49.29	48.68
4 PCAG	44.09	47.39	49.43	51.00	53.46	57.78	47.01	62.94	48.49	47.64	50.58	44.61
7 AG	47.17	49.07	48.79	58.72	62.95	61.56	54.73	57.03	51.66	49.61	49.78	44.97
11 MG	46.52	44.06	43.68	43.94	44.34	46.12	42.87	61.65	53.02	41.75	47.52	48.73
12 BG	52.90	49.15	45.16	46.58	45.20	41.45	50.09	40.38	49.95	48.44	44.17	53.11
17 CS	49.33	53.61	54.41	49.44	48.39	54.43	46.39	59.00	48.10	51.64	54.46	49.95
19 Ex	51.55	46.72	45.87	46.80	48.45	44.77	49.59	53.33	50.95	42.85	45.00	46.13
21 LSD	49.59	47.56	50.15	46.52	47.38	49.53	44.65	62.83	50.35	49.71	51.88	46.61
47 IT	44.50	45.48	46.80	45.92	47.63	50.50	45.41	64.15	49.33	43.67	48.96	43.15
48 IF	43.06	44.28	45.41	46.27	47.92	46.36	45.04	51.30	48.58	51.60	52.33	40.87
52 Mar	48.57	51.90	52.01	47.99	49.30	49.11	48.41	53.37	48.07	48.30	43.30	48.99
55 AWS	44.99	45.10	46.39	46.18	47.38	50.88	44.35	68.59	50.04	44.75	48.30	46.47
87 Ef	50.87	46.87	44.75	45.68	44.81	40.26	48.57	40.44	51.47	46.60	43.77	50.75
106 Pop	39.62	36.18	34.71	36.79	37.31	34.42	37.16	47.28	52.87	45.33	47.39	37.44
112 Cr	50.59	49.52	47.86	47.88	47.94	50.21	47.88	55.89	51.64	43.36	48.60	50.71
122 Weak	43.45	43.98	47.34	46.59	49.85	53.29	43.78	61.43	49.17	42.94	49.32	39.33
129 Dr	52.16	55.25	59.28	68.18	72.97	76.02	64.51	64.72	51.63	47.16	53.83	46.06
136 Com	47.10	44.91	41.42	42.22	38.83	36.00	43.24	51.43	56.41	45.16	48.24	42.31
145 Proj	55.28	55.65	55.49	54.57	55.17	57.32	54.21	42.00	35.84	49.89	52.35	57.66
153 NAnt	45.82	49.84	52.79	52.56	54.15	60.69	49.92	64.22	48.47	48.92	52.37	48.73
161 ChrO	47.80	49.39	50.47	50.26	51.09	53.83	48.94	59.97	48.12	44.51	47.33	46.84
163 SimO	47.52	46.94	49.89	49.67	53.18	55.34	48.36	63.08	50.55	41.12	45.92	43.09
191 WOW	46.54	48.26	49.71	49.27	50.61	55.75	46.37	67.28	50.14	45.74	51.47	46.42
199 WOWs	44.51	47.11	46.03	46.06	44.73	46.32	44.89	60.26	51.65	51.81	53.91	50.22
207 SOW	46.71	48.43	50.50	50.56	52.65	56.29	47.50	66.78	49.16	44.94	51.34	44.53
220 AW	52.92	51.20	51.25	51.20	51.52	53.12	51.45	63.15	45.95	43.85	44.76	56.03
223 Hum	49.01	49.73	49.90	50.96	52.91	47.56	51.83	38.18	52.69	53.95	52.91	45.80

61 Amphetamine, Benzedrine, 15 mg; 70 Pyrahexyl-60 mg; 71 Pyrahexyl-90 mg; 80 Alcohol-2.12 cc of 30% alcohol/Kg; 81 Alcohol-3.0 cc of 30% alcohol/Kg; 82 Alcohol-4.43 cc of 30% alcohol/Kg; 83 Alcohol-1.1 cc of 30% alcohol/Kg; 85 Alcoholics-day 2 of withdrawal from alcohol; 86+87+88 Alcoholics-1, 2 & 3 weeks after withdrawal of alcohol; 89 Normal college, male- by Yamahiro; 90 Normal college, female- by Yamahiro; 91 No-drug

APPENDIX TABLE 2 (CONTINUED)

MEAN UNCORRECTED T-SCORES

CONDITION NO.	94	108	109	Gp 1 110	Gp 2 110	115	116	117	118	Gp 1 123	Gp 2 123	123
N	171	11	12	42	37	6	6	6	6	51	73	124
Scale No.	Crim	Cyc 3 mg/ 70 Kg	Nal 6 mg/ 70 Kg	No Drug	No Drug	No Drug	Cyc 6 mg/ 70 kg Chron	Cyc 6 mg/ 70 kg Chron	Cyc Day 5 Withd	Ad-Gp Withd	Ad-Gp No Withd	Ad-Gp Total
101 Re	51.75	47.84	47.05	44.50	43.94	46.18	47.01	46.10	54.53	57.59	50.61	53.48
2 GDP	51.15	53.42	52.22	50.55	49.83	54.84	55.50	50.46	57.67	52.23	49.16	50.42
102 Pyp	56.71	68.45	68.47	67.86	67.07	73.92	71.64	69.09	71.64	61.63	60.49	60.96
10 MBG	47.83	42.60	43.18	48.04	46.77	46.24	46.69	46.01	43.07	45.86	47.22	46.66
108 SoW	49.75	57.95	57.65	52.48	53.71	54.97	52.60	51.12	51.41	50.71	49.52	50.02
111 Con	63.96	29.55	30.51	42.61	41.86	37.17	37.94	40.23	32.98	45.29	50.23	48.19
127 Mal	55.82	45.82	48.74	45.92	46.41	47.14	48.42	51.28	51.28	46.99	50.69	49.18
125 GDE	46.02	66.09	73.90	48.51	49.61	44.68	48.76	47.39	54.53	59.01	50.90	54.24
123 Tir	50.37	58.25	61.24	47.72	48.16	50.04	51.40	46.65	58.18	58.06	51.82	54.39
29 Imp	48.15	50.92	48.94	52.02	52.11	53.66	55.19	49.08	52.75	51.85	48.99	50.16
143 Int	50.63	58.20	56.07	56.55	55.56	54.14	53.09	54.84	53.42	47.53	48.69	48.20
115 Taste	50.95	58.28	62.12	49.07	48.08	44.97	47.75	46.82	48.68	57.40	49.05	52.49
4 PCAG	50.40	51.65	53.54	44.70	44.86	44.09	47.82	45.53	58.70	58.89	52.17	54.94
7 AG	49.13	49.40	50.18	45.01	45.66	41.64	51.40	48.15	45.71	57.57	50.30	53.29
11 MG	52.07	48.73	44.50	46.28	45.73	47.52	50.20	47.85	55.78	50.83	48.43	49.42
12 BG	49.66	45.78	44.88	55.18	53.86	53.33	51.81	53.33	43.66	41.94	47.41	45.16
17 CS	53.08	54.49	55.10	48.59	49.03	49.74	53.59	51.90	61.71	61.66	54.23	57.28
19 Ex	49.30	41.21	44.14	48.86	48.01	45.87	42.85	47.16	43.28	50.00	46.95	46.93
21 LSD	51.56	49.29	51.32	46.59	46.59	47.64	47.14	45.67	52.53	61.39	51.62	55.65
47 IT	51.35	46.91	48.07	43.99	43.42	41.64	43.99	44.18	51.61	56.19	48.50	51.66
48 IF	46.53	43.00	47.12	41.25	42.27	37.75	40.87	39.83	39.31	51.26	50.31	50.70
52 Mar	50.62	49.34	48.37	47.79	48.72	48.07	48.68	51.28	50.62	52.01	48.96	50.23
55 AWS	52.70	48.97	48.66	45.20	44.52	46.36	48.86	46.26	56.99	58.18	50.73	53.79
87 Ef	47.61	42.48	42.09	52.05	51.20	49.72	48.61	50.46	39.86	38.50	46.79	43.38
106 Pop	46.35	31.76	33.49	41.21	39.89	36.25	36.25	37.36	32.93	39.05	41.15	40.28
112 Cr	51.39	50.36	47.42	47.92	47.94	47.68	52.44	48.93	53.95	39.47	39.29	39.37
*122 Weak	54.07	41.76	46.23	41.60	42.51	39.91	42.44	40.74	52.98	67.73	59.03	62.62
129 Dr	49.83	54.97	64.26	44.10	45.15	43.41	46.19	47.58	51.75	53.51	49.89	51.38
136 Com	55.48	40.20	38.44	45.72	44.62	38.44	45.53	46.19	43.92	34.18	40.59	37.96
145 Proj	52.63	60.82	58.81	56.63	57.30	56.29	58.07	55.70	56.88	52.91	50.09	51.24
153 NAnt	51.98	57.12	60.05	46.77	46.90	49.80	50.84	47.70	61.52	61.25	52.16	55.90
161 ChrO	51.71	53.73	55.65	48.40	48.30	50.43	53.73	57.02	54.82	57.41	51.38	53.86
163 SimO	50.83	47.70	52.36	44.30	43.66	41.70	44.36	42.81	49.92	54.98	48.77	51.33
191 WOW	53.24	51.62	54.48	43.89	45.35	44.84	48.98	48.57	59.15	60.86	51.32	55.24
199 WOWs	52.51	50.06	47.90	47.24	49.40	52.13	55.84	54.80	69.09	54.80	51.27	52.73
207 SOW	52.09	52.29	54.58	44.78	44.53	43.23	45.70	46.19	58.36	62.85	52.10	56.53
220 AW	52.68	53.24	50.39	53.79	51.37	58.39	58.61	55.49	57.49	52.25	50.20	51.04
223 Hum	45.73	44.35	49.36	48.72	49.23	44.00	45.24	47.70	39.06	45.09	47.83	46.72

94 Criminals; 108 Cyclazocine-.3 mg/70 Kg; 109 Nalorphine-8 mg/70 Kg; 110 No-drug, group 1; 110 No-drug, group 2; 115 No-drug; 116 Cyclazocine, chronic at 6 mg/70 Kg; 117 Cyclazocine, chronic stabilization at 6 mg/70 Kg; 118 Cyclazocine, Day 5 withdrawal; 123 General population addicts, withdrawal of opiates, group 1; 123 General population of addicts, no withdrawal of opiates, group 2; 123 Total general population of opiate addicts.

APPENDIX TABLE 2 (CONTINUED)
MEAN UNCORRECTED T-SCORES

CONDITION NO.	131	132	133	150	151+ 152+ 153	154	154+ 168	168	170	170+ 173	173	174
N	42	42	42	15	27	15	73	58	58	189	131	171
Scale No.	Sim Op Acute	Sim Op Chron	Sim Op Withd	No Drug	MS or Her Chr	MS or Her Day 10 Withd	AVE 154 + 168	Ad-Gp Withd	Ad-Gp No Drug	AVE 170 + 173	Ad No Drug	Sim No Drug Street
101 Re	53.86	53.52	69.43	43.88	47.07	58.66	58.52	58.48	51.45	48.90	47.77	45.83
2 GDP	57.83	57.62	63.33	49.20	52.09	53.04	54.80	55.25	53.10	51.80	51.22	51.76
102 Pyp	67.75	68.51	66.49	66.87	68.19	64.83	62.62	62.06	63.11	65.24	66.18	67.10
10 MBG	59.21	60.21	45.11	45.29	44.30	41.76	47.42	48.89	52.58	48.95	47.35	51.36
108 SoW	61.69	59.98	61.85	55.10	59.53	60.21	50.64	48.18	49.64	51.43	52.23	51.98
111 Con	37.51	38.65	32.82	39.16	38.01	37.17	44.88	46.87	46.87	45.22	44.49	44.67
127 Mal	43.84	44.74	46.41	47.41	47.92	46.89	46.38	46.24	45.06	46.59	47.27	45.58
125 GDE	67.07	65.95	78.57	49.63	55.75	65.13	57.34	55.32	50.51	49.80	49.47	47.72
123 Tir	55.67	55.57	62.06	48.82	52.08	65.36	58.68	56.94	50.41	48.74	47.96	45.77
29 Imp	57.20	57.46	54.58	47.86	48.33	50.42	58.83	54.71	52.78	52.05	51.72	52.67
143 Int	56.55	56.40	47.08	49.28	50.80	48.86	51.20	51.82	53.99	53.36	53.09	55.26
115 Taste	66.42	63.64	75.43	45.71	53.62	58.69	57.59	57.31	52.03	49.24	48.00	48.35
4 PCAG	56.21	56.18	70.30	43.97	50.07	65.65	60.13	58.70	51.29	49.05	48.07	43.94
7 AG	51.98	51.52	62.90	47.98	49.86	55.79	57.05	57.37	54.68	50.28	48.33	48.93
11 MG	56.14	57.25	55.66	44.42	46.84	46.84	53.20	54.85	51.25	49.52	48.73	49.30
12 BG	47.97	48.62	35.48	50.72	48.06	40.84	45.31	46.47	53.88	52.84	52.39	55.98
17 CS	49.08	48.85	60.56	50.26	58.77	68.05	60.74	58.84	50.85	50.72	50.67	45.85
19 Ex	60.43	59.32	56.92	42.85	45.61	46.98	50.62	51.57	52.74	50.03	48.81	51.32
21 LSD	51.62	50.59	71.25	44.59	48.79	65.19	61.39	60.39	51.50	49.91	49.21	48.35
47 IT	56.17	55.85	68.84	42.29	46.51	59.77	57.73	57.20	51.29	47.86	46.34	44.98
48 IF	47.57	44.89	58.50	44.10	45.67	57.01	51.85	50.51	48.14	46.47	45.72	42.02
52 Mar	56.70	54.33	64.55	49.07	48.65	51.16	48.80	48.22	48.53	49.07	49.26	47.52
55 AWS	52.49	52.99	68.62	45.11	48.30	59.87	58.99	58.76	51.13	49.32	48.51	46.05
87 Ef	52.00	51.97	34.59	50.09	46.00	33.28	40.30	42.10	50.65	49.93	49.61	53.80
106 Pop	44.47	44.21	33.98	37.89	36.08	36.74	40.71	41.74	45.89	42.08	39.91	43.92
112 Cr	48.39	48.93	43.16	46.67	44.88	42.35	46.94	48.13	45.41	48.25	49.52	50.74
122 Weak	51.59	51.64	67.12	43.45	52.07	67.40	64.47	63.71	54.96	48.58	45.78	43.70
129 Dr	62.07	61.28	69.51	44.66	49.35	59.67	56.23	55.34	49.30	48.16	47.66	45.86
136 Com	36.47	37.51	28.43	43.09	36.43	27.46	41.15	44.68	43.28	44.48	45.00	47.60
145 Proj	63.36	62.39	64.59	53.80	58.14	58.65	52.42	50.80	53.96	54.00	54.02	53.96
153 NAnt	51.92	52.01	69.66	47.58	52.42	66.08	59.53	57.84	49.52	49.55	49.56	45.42
161 ChrO	61.40	61.72	74.10	41.22	69.33	65.58	60.09	58.66	50.61	50.33	50.21	48.09
163 SimO	70.37	68.51	67.96	41.39	47.90	56.22	57.21	57.46	51.56	47.91	46.30	45.58
191 WOW	56.36	56.87	72.09	45.67	54.01	65.15	67.46	68.05	45.61	47.75	48.71	45.26
199 WOWs	44.89	47.08	60.67	50.13	56.80	60.70	64.23	65.15	44.82	49.30	51.27	46.35
207 SOW	56.49	56.42	78.10	40.73	52.15	75.34	64.80	62.07	52.56	49.38	47.98	45.21
220 AW	53.56	54.00	51.97	56.03	51.00	39.05	45.63	47.33	55.79	54.61	54.08	53.24
223 Hum	44.64	44.72	35.95	49.19	45.61	44.25	44.72	44.84	48.00	47.98	47.95	48.89

131 Opiate, simulation of the acute effect; 132 Opiate, simulation of the chronic effects of opiates; 133 Opiate, simulation of the withdrawal effects of opiates; 150 No-drug; 151+152+153 Chronic effects of morphine (240 mg/day) or heroin (95 mg/day); 154 Morphine or heroin withdrawal, 10th day of dose reduction, strong; 154+168 Average of conditions 154 and 168; 168 Opiate withdrawal, weak in general population addicts; 170 No-drug control group for general population with weak opiate withdrawal; 173 No-drug; 174 No-drug, simulation of no-drug effect on the street.

APPENDIX TABLE 2 (CONTINUED)
MEAN UNCORRECTED T-SCORES

CONDITION NO.	177	178	179	180	181	182	183	183 + 209	184	185	186	187
N	10	10	10	10	10	10	50	99	43	36	32	9
Scale No.	Sim Weak Op	Sim Str Op	Sim Weak Op	Sim Str Op	Sim Weak Hook	Sim Str Hook	Sim Reef	Ave 183+ 209	Sim Coc	Sim GB	Sim PP	Sim LSD
101 Re	56.66	69.30	60.59	56.12	57.97	61.17	52.32	52.45	58.55	60.86	54.04	66.23
2 GDP	60.65	66.42	61.31	58.82	62.88	60.52	56.95	56.82	59.30	61.54	56.70	61.18
102 Pyp	67.07	70.87	72.40	66.15	69.05	70.42	67.10	67.37	67.49	67.87	64.98	62.50
10 MBG	54.93	56.29	52.62	59.55	62.54	56.15	65.28	65.74	66.53	54.16	62.79	67.44
108 SoW	60.27	59.55	65.08	57.59	59.55	61.87	58.98	58.52	58.61	63.15	58.45	60.32
111 Con	32.06	29.09	30.92	35.72	31.61	25.20	38.70	38.29	33.21	29.98	35.91	43.78
127 Mal	44.79	39.45	40.79	48.61	44.60	41.74	36.25	36.25	36.88	40.25	39.30	34.65
125 GDE	68.13	86.07	75.67	74.45	76.08	81.59	65.68	65.78	70.98	80.20	67.11	78.32
123 Tir	51.40	69.31	62.39	59.13	57.10	61.58	48.39	49.08	37.53	65.32	40.97	50.27
29 Imp	56.41	57.88	55.50	53.11	56.41	58.24	58.72	59.01	59.60	58.85	61.69	51.52
143 Int	54.42	52.09	50.19	53.36	54.21	48.08	56.66	56.42	55.94	47.44	56.09	53.55
115 Taste	62.58	83.72	70.92	67.03	71.48	65.36	65.36	65.31	69.89	70.77	66.75	81.43
4 PCAG	55.90	71.04	61.92	58.65	59.00	65.02	49.09	49.45	46.68	66.26	45.51	57.47
7 AG	51.40	51.89	58.23	52.38	56.28	52.38	55.31	54.53	55.43	59.67	53.23	54.92
11 MG	57.65	64.49	53.62	56.84	57.65	58.05	56.84	56.68	56.24	53.44	52.78	60.49
12 BG	45.06	34.55	41.43	41.25	45.60	36.36	55.60	55.45	55.56	37.07	56.03	52.01
17 CS	47.87	61.46	56.84	50.69	50.18	54.28	38.08	38.67	34.64	53.54	39.36	46.05
19 Ex	59.37	60.40	56.79	58.34	64.53	60.14	68.25	68.94	84.01	56.12	74.80	82.41
21 LSD	54.50	59.21	58.04	53.33	50.97	56.27	50.03	49.76	66.57	55.00	61.95	64.81
47 IT	56.29	72.83	59.77	59.88	61.19	64.12	54.46	54.78	61.51	63.73	56.00	74.28
48 IF	48.06	53.37	53.37	49.93	45.87	53.05	46.68	45.59	46.43	55.53	49.95	56.31
52 Mar	55.53	60.57	55.15	54.37	55.92	61.34	54.61	54.53	62.38	60.84	58.17	68.69
55 AWS	55.76	66.90	60.04	55.82	55.70	60.04	50.23	50.39	55.60	60.16	51.92	60.80
87 Ef	46.86	38.60	41.95	47.97	52.43	44.18	58.70	58.78	59.11	43.83	56.19	53.80
106 Pop	43.11	36.74	36.21	42.98	45.63	37.93	52.96	53.33	51.96	39.65	48.75	53.73
112 Cr	54.50	51.19	49.08	48.63	50.14	46.22	52.67	52.24	52.88	50.27	52.56	43.16
122 Weak	48.51	60.65	50.78	55.08	52.81	50.39	48.10	48.61	46.43	53.82	43.85	60.42
129 Dr	63.01	78.44	70.10	69.68	70.51	75.93	65.68	65.71	65.57	79.19	61.13	75.14
136 Com	36.70	33.02	29.15	35.92	37.67	32.63	42.24	41.93	42.58	31.51	42.80	35.87
145 Proj	63.04	66.60	66.95	58.78	62.87	63.93	60.98	60.84	60.18	63.90	58.57	61.43
153 NAnt	55.11	68.18	63.53	55.74	53.86	53.28	46.97	47.06	46.70	64.07	48.13	56.98
161 ChrO	66.89	72.82	69.20	62.94	67.55	69.86	55.37	55.99	61.46	64.06	58.46	67.98
163 SimO	63.28	83.80	66.61	73.41	75.01	78.87	68.13	69.01	73.81	71.68	64.97	81.29
191 WOW	57.90	73.70	61.01	60.64	60.39	58.10	50.68	50.91	57.25	63.85	55.80	66.69
199 WOWs	48.86	52.67	50.76	48.22	45.05	51.08	34.76	35.65	39.68	47.65	42.63	42.44
207 SOW	59.22	72.84	64.55	60.40	61.39	57.02	52.15	52.42	59.83	63.88	55.70	58.02
220 AW	52.65	57.19	56.65	50.79	54.52	49.85	56.31	55.21	51.89	58.30	50.80	49.28
223 Hum	41.04	37.34	37.58	44.99	46.47	42.03	52.69	53.41	52.52	42.15	51.56	43.31

177 Simulated effect of a weak dose of an opiate on the street; 178 Simulated effect of a strong dose of an opiate on the street; 179 Simulated effect of a weak dose of an opiate on the research ward; 180 Simulated effect of a strong dose of an opiate on the research ward; 181 Simulated effect of a weak dose of an opiate during chronic administration; 182 Simulated effect of a strong dose of an opiate during chronic administration; 183 Simulated effect of reefers; 183+209; 184 Simulated effect of cocaine; 185 Simulated effect of goofballs; 186 Simulated effect of pep pills; 187 Simulated effect of LSD.

APPENDIX TABLE 2 (CONTINUED)
MEAN UNCORRECTED T-SCORES

CONDITION NO.	189	192	192 + 195	195	196	196 + 222	197	198	199	200	201	202
N	7	9	16	7	54	103	30	47	23	24	20	23
Scale No.	Sim Cpz	Sim Milt	Ave 192 + 195	Sim Dor	Sim Alc	Ave 192 + 196	Sim Alc day After	Sim Op Day After	Sim PP Day After	Sim Reef Day After	Sim Coc Day After	Sim GB Day After
101 Re	55.57	55.79	58.23	61.37	56.74	58.98	62.53	52.80	60.07	48.44	57.00	61.33
2 GDP	53.87	57.10	58.80	60.99	58.84	60.52	59.64	55.65	59.01	55.22	58.49	59.01
102 Pyp	64.02	65.55	67.27	69.46	69.61	67.74	68.54	68.27	67.46	68.85	66.92	67.07
10 MBG	50.60	50.08	50.39	50.80	57.01	56.48	42.48	47.15	46.69	46.47	51.94	44.91
108 SoW	57.95	56.95	59.29	62.28	58.61	60.62	57.06	56.74	58.64	57.43	56.61	56.56
111 Con	31.83	35.13	31.40	26.60	27.05	27.17	29.62	35.54	32.64	35.08	37.18	35.43
127 Mal	44.05	46.30	42.47	37.53	37.30	39.95	45.23	46.83	43.02	47.69	48.23	48.17
125 GDE	77.45	68.58	77.69	89.40	74.86	76.31	78.12	63.27	69.37	58.61	63.44	74.33
123 Tir	63.33	66.99	70.49	74.97	57.88	60.39	68.78	54.99	55.73	53.77	52.62	66.54
29 Imp	51.70	54.98	54.93	54.84	62.46	61.67	53.90	54.27	55.37	56.72	54.76	53.22
143 Int	48.65	49.56	46.39	42.31	51.99	50.15	46.96	49.96	46.15	53.25	51.25	47.63
115 Taste	66.95	63.51	70.58	79.66	61.24	63.04	70.18	58.50	66.08	55.86	60.36	68.75
4 PCAG	61.46	63.78	68.79	75.22	58.84	61.73	69.03	54.52	58.48	49.24	55.56	64.98
7 AG	48.26	53.30	57.81	63.60	66.40	66.77	60.02	50.41	55.11	50.59	51.40	56.81
11 MG	51.63	51.09	52.21	53.64	51.87	52.48	53.22	51.19	51.25	51.45	53.62	53.36
12 BG	36.20	37.12	33.00	27.67	45.85	43.06	34.06	44.31	40.89	46.54	47.32	35.78
10 CS	56.95	60.00	61.41	63.18	42.64	45.05	65.56	54.69	56.82	52.64	52.74	61.61
19 Ex	55.01	45.15	46.72	48.76	62.36	60.61	44.83	50.10	54.65	46.93	57.56	47.24
21 LSD	54.71	48.44	50.65	53.44	53.21	54.50	64.13	56.74	63.92	50.71	60.83	61.36
47 IT	58.84	55.66	59.16	63.66	59.27	61.90	63.39	53.12	58.87	48.03	57.27	61.85
48 IF	51.81	48.68	53.37	59.39	50.07	52.17	52.95	47.55	51.13	42.18	47.43	53.30
52 Mar	61.49	54.49	59.25	65.36	51.86	52.83	56.04	51.55	55.42	51.93	56.31	60.60
55 AWS	54.72	55.99	58.03	60.66	55.55	57.87	63.78	53.87	59.72	49.82	57.48	62.07
87 Ef	43.24	43.15	40.20	36.38	49.75	48.08	31.72	43.65	39.37	46.51	46.91	35.93
106 Pop	36.09	37.66	34.74	30.98	45.08	44.47	31.30	36.20	34.63	35.70	40.72	34.11
112 Cr	44.31	47.51	45.16	42.15	53.09	52.76	50.03	49.55	49.62	51.63	51.11	47.53
122 Weak	56.53	56.50	60.93	66.64	49.32	50.15	58.55	51.11	54.65	45.90	52.18	55.84
129 Dr	63.96	67.26	74.18	83.02	81.86	82.23	73.02	56.41	60.36	52.09	55.71	67.97
136 Com	36.23	34.57	30.70	25.72	37.59	35.4[illegible]	34.70	40.26	37.18	41.42	38.34	34.57
145 Proj	57.55	56.88	59.95	63.92	59.97	61.44	60.02	58.60	58.53	59.70	59.76	59.77
153 NAnt	58.55	60.89	64.58	69.32	54.72	56.87	68.93	55.60	60.56	52.56	55.80	65.10
161 ChrO	60.31	56.29	64.42	74.89	59.94	62.61	64.59	58.07	62.75	52.08	61.96	63.17
163 SimO	69.40	65.01	71.01	78.72	66.08	67.23	59.59	53.96	57.95	48.47	57.89	59.63
191 WOW	62.79	59.90	63.81	68.84	56.03	57.71	65.40	57.17	62.69	50.49	58.15	64.69
199 WOWs	53.11	52.32	51.87	51.30	43.55	44.92	57.43	53.40	54.03	49.49	52.03	56.80
207 SOW	61.98	60.34	64.33	69.46	58.29	61.24	70.67	57.40	64.43	49.81	60.01	66.36
220 AW	46.87	54.31	53.30	52.00	56.47	56.50	55.28	51.11	53.43	56.11	55.32	56.56
223 Hum	43.83	42.77	42.92	43.11	51.56	49.36	38.57	44.50	41.04	44.00	43.14	39.11

189 Simulated effect of chlorpromazine; 192 Simulated effect of Miltown; 192+195; 195 Simulated effect of Doriden; 196 Simulated effect of alcohol; 196+222; 197 Simulated effect of morning after the use of alcohol; 198 Simulated effect of the morning after using opiates; 199 Simulated effect of the morning after using pep pills; 200 Simulated effect of the morning after using reefers; 201 Simulated effect of the morning after using cocaine; 202 Simulated effect of the morning after using goofballs.

APPENDIX TABLE 2 (CONTINUED)
MEAN UNCORRECTED T-SCORES

CONDITION NO.	203	203+ 204	204	205	205+ 248	206	207	208	209	212	213	214
N	12	27	15	32	54	14	49	49	49	11	28	30
Scale No.	Sim Alc Kick	Ave 203+ 204	Sim GB Kick	Sim Op Kick	Ave 205+ 248	Sim PP Kick	Sim Other Ad No Drug	Sim Other Op Ad	Sim Other Reef	Sim Disas	Sim Death	Sim Get Up
101 Re	78.85	75.78	73.32	71.25	71.30	70.54	53.23	55.46	52.58	65.17	55.16	49.15
2 GDP	68.82	67.49	66.42	62.04	62.06	62.76	57.37	58.66	56.65	58.43	53.91	52.48
102 Pyp	65.16	68.70	71.53	64.02	63.29	66.96	69.49	68.62	67.66	60.14	62.71	65.96
10 MBG	41.82	42.34	42.75	39.79	38.92	41.39	50.00	60.77	66.20	42.48	41.97	46.10
108 SoW	61.96	63.30	64.36	60.23	60.35	59.73	56.31	61.33	58.06	54.54	55.08	54.08
111 Con	27.26	27.35	27.42	30.12	30.19	31.35	40.44	34.40	37.85	40.78	39.59	40.09
127 Mal	42.22	40.58	39.26	48.19	49.24	45.29	44.45	45.23	36.23	47.37	51.49	48.93
125 GDE	89.38	88.13	87.15	82.22	80.51	81.24	54.61	71.37	65.88	68.50	60.11	57.18
123 Tir	71.42	71.22	71.06	67.92	65.89	65.65	50.70	59.25	49.78	49.74	53.00	55.47
29 Imp	57.33	58.45	59.34	54.01	53.94	56.54	54.76	57.75	59.33	49.41	49.01	50.97
143 Int	42.86	43.30	43.64	43.15	42.31	42.60	52.58	52.83	56.19	45.90	47.36	50.89
115 Taste	80.66	80.81	80.93	73.88	72.26	78.87	54.13	65.82	65.25	62.33	53.24	56.09
4 PCAG	79.64	78.30	77.23	73.72	71.83	71.66	51.31	58.43	49.83	54.94	53.29	51.43
7 AG	72.55	68.84	65.88	59.03	58.54	63.60	54.34	50.95	53.74	53.84	50.00	48.47
11 MG	56.40	56.54	56.64	54.29	54.37	56.10	51.81	57.39	56.52	54.23	51.49	49.80
12 BG	27.67	29.21	30.44	30.04	28.78	31.55	50.40	46.74	55.32	39.35	40.28	46.69
17 CS	68.97	69.02	69.07	71.66	70.12	66.84	53.28	50.62	39.26	52.85	56.41	56.96
19 Ex	54.03	53.56	53.17	52.68	51.83	51.88	52.97	60.40	69.66	55.29	46.54	45.51
21 LSD	73.87	74.40	74.82	74.29	75.88	74.26	55.80	51.83	49.50	69.90	57.45	52.[illegible]
47 IT	82.54	78.51	75.30	71.13	70.41	71.12	52.18	59.41	55.10	62.74	51.73	49.54
48 IF	67.17	65.11	63.45	61.86	61.92	60.28	46.51	47.09	44.48	52.66	47.45	44.10
52 Mar	70.32	65.40	61.45	61.46	62.31	59.56	50.85	53.06	54.49	58.13	51.43	49.61
55 AWS	78.45	75.60	73.32	71.43	71.56	70.24	53.25	54.43	50.55	65.21	57.21	50.25
87 Ef	26.95	27.08	27.19	27.72	27.23	28.67	48.06	50.50	58.85	37.21	39.57	45.52
106 Pop	30.28	30.33	30.37	30.71	30.13	28.99	41.00	44.68	53.70	34.55	35.57	37.84
112 Cr	48.67	48.90	49.08	43.66	43.99	46.99	49.50	48.03	51.81	51.33	50.65	49.94
122 Weak	67.10	66.51	66.03	71.45	69.70	64.85	52.05	55.29	49.14	52.78	52.10	48.18
129 Dr	79.90	79.02	78.31	70.01	69.14	72.31	51.03	65.58	65.75	64.07	55.17	50.08
136 Com	28.76	27.83	27.08	27.37	27.29	31.80	40.61	35.79	41.60	42.31	41.89	43.80
145 Proj	65.62	66.69	67.54	62.90	61.23	61.25	57.59	61.23	60.68	58.55	53.63	54.92
153 NAnt	78.48	76.67	75.21	74.71	74.62	72.65	52.79	62.79	47.15	65.58	62.37	52.35
161 ChrO	77.59	77.62	77.66	76.04	75.42	72.06	57.69	66.43	56.62	60.01	51.96	52.96
163 SimO	70.57	69.65	68.92	67.05	65.56	63.87	50.83	72.93	69.90	56.78	49.75	49.56
191 WOW	79.36	79.44	79.51	75.56	75.00	74.34	53.79	59.57	51.13	63.16	57.54	52.64
199 WOWs	65.37	66.20	66.86	68.45	68.67	65.15	50.79	48.57	36.54	59.30	58.45	52.99
207 SOW	85.51	83.81	82.45	83.61	82.77	78.77	54.43	60.53	52.69	67.76	58.00	52.73
220 AW	58.28	56.97	55.95	48.60	49.13	54.39	54.50	50.19	54.11	53.36	56.14	50.48
223 Hum	31.66	31.51	31.41	34.13	33.44	35.02	43.53	45.53	54.15	38.05	37.93	46.47

203 Simulated effect of kicking an alcohol habit; 203+204; 204 Simulated effect of kicking a goofball habit; 205 Simulated effect of kicking an opiate habit; 205+248; 206 Simulated effect of come down after using pep pills continuously for 30 days; 207 Answer questions as the average addict under no-drug would answer them; 208 Answer questions as the average addict would when he is taking an opiate; 209 Answer questions as the average reefer user would when he is using reefers; 212 Simulated effect of experience felt during a disaster; 213 Simulated effect of experience felt during the death of a member of the family; 214 Simulated effect of experience felt upon getting up in the morning.

APPENDIX TABLE 2 (CONTINUED)

MEAN UNCORRECTED T-SCORES

CONDITION NO.	215	216	222	223	224	226	227	228	244	247	248	254
N	31	28	49	18	16	22	16	19	29	21	22	6
Scale No.	Sim Party	Sim Flu	Sim Other Alco Alc	Sim Sex	Sim Date	Sim Misc Drugs	Sim Reef Kick	Sim Coc Kick	Sim Op	Sim Expec	Sim Loss Op	Pentaz 1-1/2 Weeks
101 Re	47.64	68.02	61.46	53.50	47.53	52.50	51.74	67.99	54.21	53.01	71.37	56.49
2 GDP	52.51	57.99	62.36	52.87	50.85	53.24	56.59	62.97	55.99	55.25	62.07	51.12
102 Pyp	63.54	61.57	65.67	59.71	66.12	59.73	68.50	71.64	64.81	65.83	62.23	68.85
10 MBG	56.07	38.28	55.89	64.72	60.92	51.18	44.96	46.70	56.89	45.11	37.65	46.47
108 SoW	56.51	61.39	62.81	56.06	55.83	53.74	55.72	60.94	58.07	56.68	60.53	63.30
111 Con	35.45	28.98	27.30	32.84	37.99	43.27	36.41	31.10	38.15	33.57	30.28	32.20
127 Mal	44.66	50.40	42.89	41.74	42.94	46.07	46.03	43.80	48.95	49.14	50.76	50.65
125 GDE	58.14	85.38	77.92	66.31	56.16	57.83	57.18	75.43	71.51	59.87	78.04	86.13
123 Tir	44.25	72.48	63.16	45.52	40.21	45.30	51.91	59.22	58.07	42.78	62.88	73.09
29 Imp	53.46	52.29	60.83	54.98	51.37	52.49	54.36	55.94	54.97	52.22	53.83	50.00
143 Int	52.56	41.55	48.14	51.90	58.81	52.43	48.50	48.44	49.41	47.44	41.10	44.63
115 Taste	51.01	78.47	65.02	58.87	50.76	51.46	53.20	72.97	66.70	53.44	69.91	80.91
4 PCAG	43.79	74.17	64.93	47.44	41.69	47.51	49.54	64.97	57.64	46.22	69.08	69.32
7 AG	51.80	55.76	67.19	49.50	49.27	49.40	50.79	56.67	49.63	51.28	57.83	49.78
11 MG	48.19	51.07	53.12	50.99	49.70	49.56	49.32	56.66	54.57	49.05	54.51	46.18
12 BG	52.08	28.12	40.02	51.41	56.75	50.14	46.34	39.01	44.28	43.28	26.93	35.51
17 CS	37.75	72.15	47.69	37.93	35.59	44.59	51.15	60.89	53.31	49.51	67.89	66.84
19 Ex	60.25	47.19	58.70	72.97	65.43	59.63	48.66	63.21	56.12	54.15	50.59	51.03
21 LSD	48.85	68.28	55.98	57.27	51.56	58.77	57.83	72.55	52.12	62.98	78.20	54.50
47 IT	48.12	69.52	64.81	58.02	48.55	51.96	50.46	68.76	58.19	51.22	69.37	61.95
48 IF	43.34	58.94	54.48	50.42	39.12	46.84	46.93	50.16	47.71	46.01	62.02	53.89
52 Mar	51.59	63.04	53.91	54.72	52.75	48.99	50.08	64.01	52.67	51.20	63.58	60.95
55 AWS	47.51	69.34	60.42	50.90	46.03	51.76	52.91	67.42	53.92	53.41	71.74	56.38
87 Ef	57.43	26.51	46.24	60.68	60.13	50.75	44.66	37.06	47.97	44.78	26.52	37.45
106 Pop	49.28	29.23	43.79	55.14	52.40	44.98	36.55	32.56	42.16	35.78	29.29	30.73
112 Cr	50.84	44.20	52.39	50.11	51.76	50.17	49.77	51.36	49.79	50.12	44.49	39.89
122 Weak	45.12	70.99	51.06	49.47	41.96	48.31	48.28	60.80	52.12	48.23	67.15	64.37
129 Dr	58.41	73.18	82.61	59.62	50.45	53.83	51.75	63.27	65.34	49.66	67.84	69.80
136 Com	42.68	28.14	33.02	38.87	45.33	46.11	41.23	34.07	39.91	40.38	27.17	29.73
145 Proj	57.09	60.81	63.08	59.06	56.18	54.27	57.96	64.89	57.94	55.28	58.80	61.32
153 NAnt	44.69	75.60	59.22	49.03	41.66	50.90	54.85	55.32	53.87	54.07	74.48	63.82
161 ChrO	49.69	71.60	65.54	57.38	49.20	51.63	51.46	69.49	61.56	57.96	74.53	67.45
163 SimO	54.49	65.07	68.49	67.31	55.20	54.05	49.28	66.41	68.60	49.41	63.38	67.45
191 WOW	45.27	73.85	59.57	48.43	44.76	52.48	53.71	70.31	57.96	54.85	74.19	60.60
199 WOWs	41.71	67.75	46.44	37.49	39.77	50.06	52.06	61.37	47.30	51.91	68.99	58.48
207 SOW	47.65	80.78	64.50	54.97	47.67	53.37	53.10	74.45	59.54	55.92	81.55	66.10
220 AW	53.64	48.81	56.55	52.68	51.23	49.12	53.77	53.57	50.64	51.05	49.91	49.05
223 Hum	55.97	35.09	46.94	49.48	54.81	47.58	43.09	43.09	36.52	45.75	43.11	45.66

215 Simulated effect of experience felt during a party; 216 Simulated effect of the flu; 222 Answer questions as the average alcoholic would answer them when he has been drinking alcohol; 223 Simulated effect of experience felt during sexual intercourse; 224 Simulated effect of experience felt on a date with a woman; 227 Simulated effect of come-off effect of using reefers for at least 30 days; 228 Simulated effect of come-off effect of using cocaine for at least 30 days in succession; 244 Simulated effect of opiate; 247 Simulated effect of expecting a first shot of an opiate after having been off opiates for a long time; 248 Simulated effect of not getting one's usual supply of opiates; 254 Pentazocine, chronic 1 and 1/2 weeks.

APPENDIX TABLE 2 (CONTINUED)

MEAN UNCORRECTED T-SCORES

CONDITION NO.	255	301	302	303	304	305	306	307	308	309	310	311
N	6	22	22	22	22	22	22	22	22	22	22	19
Scale No.	MS 60 mg Early Phase	Sim Ideal Self	Sim Other Mother	Sim Other Father	Sim Bef Use Drugs	Sim No Drug	Sim Op	Sim Other MI	Sim Other Alco No Drug	Sim Other Ave Man	Sim Other Crim	Sim Dep
101 Re	46.63	40.14	43.69	42.42	41.23	40.16	54.15	74.08	52.93	42.90	45.95	58.72
2 GDP	49.59	43.65	43.23	42.45	47.22	44.78	54.15	71.25	55.93	46.98	57.48	58.41
102 Pyp_2	63.76	57.03	41.11	46.38	62.50	61.05	62.50	51.08	61.95	57.03	70.52	66.11
10 MBG	41.48	56.06	49.44	49.02	52.11	54.63	56.79	48.89	51.43	51.18	47.60	37.76
108 SoW	55.58	57.22	57.06	56.58	55.69	54.71	67.18	79.42	55.60	54.95	68.23	57.86
111 Con	42.52	53.77	50.02	49.73	49.31	52.22	34.65	36.09	41.72	47.03	37.44	32.80
127 Mal	55.42	49.89	56.73	54.75	48.25	50.15	48.59	37.76	50.23	50.23	47.56	49.43
125 GDE	58.61	45.41	49.12	49.41	46.72	46.90	76.65	78.14	56.63	47.19	50.61	64.58
123 Tir	53.44	39.93	46.96	43.44	41.78	42.15	58.25	58.99	49.92	44.18	42.52	59.65
29 Imp	42.07	44.08	41.33	42.18	48.99	46.43	51.25	53.92	54.16	50.33	56.74	50.24
143 Int	44.97	55.22	51.37	48.12	53.68	53.49	47.44	41.00	48.39	53.97	52.24	43.77
115 Taste	51.46	44.38	45.14	44.13	46.15	45.64	69.40	70.17	53.23	43.87	45.39	50.72
4 PCAG	51.26	38.90	45.85	42.18	40.62	39.53	57.90	68.30	52.36	41.79	43.20	59.81
7 AG	46.52	44.52	46.74	45.41	45.19	46.96	51.40	73.14	52.29	44.97	51.40	47.16
11 MG	47.18	41.05	42.69	40.96	44.16	43.62	52.03	53.76	50.48	45.71	44.06	51.47
12 BG	44.57	61.08	49.66	49.40	57.06	58.87	43.15	34.91	49.66	54.42	54.35	33.77
17 CS	61.28	42.03	47.39	45.41	42.49	41.57	51.82	55.08	50.41	42.95	45.74	64.41
19 Ex	43.28	53.54	46.49	46.36	51.29	51.52	58.34	63.96	50.72	49.90	48.71	38.78
21 LSD	52.53	42.19	45.40	47.94	43.93	43.13	54.92	72.84	52.62	44.60	48.62	60.48
47 IT	46.90	42.76	46.52	43.50	41.82	41.92	58.59	81.19	53.54	43.40	45.67	54.91
48 IF	45.04	41.01	48.54	48.68	41.87	42.72	56.77	79.19	49.68	42.58	48.97	55.42
52 Mar	50.62	48.80	48.10	51.08	49.15	48.45	58.13	67.45	48.65	46.71	48.65	45.67
55 AWS	48.16	39.64	44.21	42.79	41.55	39.83	53.64	71.61	53.89	43.22	46.86	61.47
87 Ef	43.03	60.68	52.12	52.72	56.17	58.51	48.82	38.54	49.53	55.11	51.96	31.96
106 Pop	33.38	53.42	52.83	51.98	47.94	49.51	42.26	41.12	44.50	49.99	39.32	28.36
112 Cr	45.42	45.65	45.71	44.01	47.83	46.75	43.18	48.39	47.97	51.19	46.19	48.89
122 Weak	52.55	43.12	48.18	48.76	42.08	43.70	54.73	57.03	49.90	44.97	45.32	55.21
129 Dr	46.88	43.79	46.44	49.66	44.73	44.17	68.64	78.85	53.45	47.20	47.01	58.44
136 Com	40.71	47.15	46.88	49.09	48.39	48.03	30.87	24.71	38.96	49.54	35.81	34.36
145 Proj	53.63	53.38	52.65	49.59	55.81	53.63	61.94	76.98	54.19	53.95	65.98	59.01
153 NAnt	53.98	38.51	45.88	45.59	41.87	39.76	53.58	69.39	51.36	43.19	47.76	67.90
161 ChrO	59.76	45.20	48.04	44.75	44.00	44.00	65.08	72.42	54.03	44.15	54.47	58.75
163 SimO	45.92	46.06	44.91	43.09	44.18	43.94	73.31	70.82	50.84	44.12	44.12	51.13
191 WOW	52.51	38.22	44.21	42.46	40.08	39.30	57.57	74.19	49.59	40.66	46.64	59.71
199 WOWs	56.38	40.82	46.32	46.48	42.85	41.55	48.76	54.83	48.76	42.41	46.03	60.70
207 SOW	52.28	41.16	44.85	43.49	40.76	40.31	61.58	74.55	54.18	41.97	46.05	63.91
220 AW	47.95	47.65	47.17	46.15	51.48	49.48	48.20	60.39	55.96	54.32	55.60	58.99
223 Hum	47.28	54.54	53.09	53.09	51.06	53.53	45.80	33.24	43.56	52.07	41.19	33.93

255 Early chronic phase of being on 60 mg of morphine; 301 Answer questions as you would for your ideal self; 302 Answer questions as your mother would answer them; 303 Answer questions as your father would answer them; 304 Answer questions as you would have prior to using drugs; 305 Simulated effect of no-drug experience on the street; 306 Simulated effect of opiate; 307 Answer questions as a mentally ill person would answer them; 308 Answer questions as an average alcoholic would when he is not using alcohol; 309 Answer questions as the average man on the street would answer them; 310 Answer questions as the average criminal would answer them; 311 Answer questions as you would when feeling depressed.

APPENDIX TABLE 2 (CONTINUED)

MEAN UNCORRECTED T-SCORES

CONDITION NO.	312	313	314	315	316	317	318	319	320	321	322	510
N	19	19	19	19	19	19	19	19	19	19	19	5
Scale No.	Sim Exc	Sim Pleas	Sim Nerv	Sim Tir	Sim Anger	Sim Dang	Sim To Do Dang	Sim No Drug	Sim Op	Sim Bored	Sim Afraid	No Drug
101 Re	55.53	40.82	61.74	53.94	59.67	55.04	53.97	42.32	54.23	54.32	63.88	45.23
2 GDP	54.20	47.99	58.89	52.69	59.31	56.41	56.35	48.95	55.44	55.04	59.52	56.45
102 Pyp	64.74	62.01	65.30	62.42	68.27	66.58	65.62	63.54	63.95	66.43	62.67	66.46
10 MBG	46.70	59.86	39.56	41.20	39.84	44.05	42.63	53.78	56.21	39.05	38.70	55.34
108 SoW	57.11	54.19	57.20	57.75	64.33	54.67	57.00	52.69	61.05	59.53	55.51	56.17
111 Con	27.63	47.48	26.66	32.80	26.78	35.34	33.16	48.58	34.37	34.72	31.47	42.82
127 Mal	42.90	45.00	47.81	49.43	47.22	46.51	44.51	45.80	47.31	48.72	49.22	46.13
125 GDE	67.37	49.88	69.64	68.03	65.76	62.44	62.11	48.49	73.82	58.79	66.62	48.14
123 Tir	38.65	41.23	49.37	65.65	42.30	39.08	39.30	44.65	58.79	57.51	44.22	43.67
29 Imp	54.78	48.22	53.22	49.95	53.81	53.72	51.12	46.39	54.10	51.50	50.71	52.75
143 Int	48.22	56.89	45.33	45.10	44.99	49.56	48.77	55.01	49.79	44.99	43.11	59.28
115 Taste	53.65	48.09	53.36	53.06	54.82	56.28	56.58	47.51	66.82	48.68	54.53	45.34
4 PCAG	44.96	37.45	55.28	63.16	50.67	42.70	42.61	38.99	56.37	56.28	54.28	42.83
7 AG	50.24	44.59	51.79	47.93	55.64	49.73	46.13	46.39	49.73	51.53	53.33	50.91
11 MG	47.44	45.53	50.20	48.51	49.88	50.30	50.52	46.40	54.33	48.41	52.74	48.19
12 BG	44.64	61.99	34.44	34.34	38.83	47.21	45.20	57.61	42.36	37.11	34.44	60.99
17 CS	42.28	35.67	55.23	67.25	51.33	46.87	48.08	43.64	49.97	61.71	54.84	40.18
19 Ex	63.08	59.01	50.88	37.69	54.80	60.09	56.17	51.81	57.25	39.46	53.85	53.17
21 LSD	70.69	43.27	72.40	49.94	72.08	69.75	67.75	45.75	54.12	58.15	73.64	47.73
47 IT	55.19	43.16	57.94	53.47	56.10	50.49	51.29	43.34	56.56	50.44	58.63	44.32
48 IF	52.13	40.13	55.42	52.46	58.38	47.04	49.50	41.12	50.66	51.15	58.38	40.56
52 Mar	47.91	47.52	44.47	49.96	52.40	51.59	53.64	49.34	56.08	45.05	48.34	40.05
55 AWS	55.30	39.81	62.58	55.49	59.60	55.05	54.95	41.43	53.27	56.06	64.20	44.75
87 Ef	44.57	62.18	34.30	35.41	37.41	43.11	41.64	56.08	47.80	36.29	34.77	58.12
106 Pop	37.59	53.17	30.74	30.33	30.12	34.10	31.72	45.34	41.85	30.33	29.69	46.83
112 Cr	52.46	49.13	51.02	46.19	48.42	48.89	49.76	48.81	48.42	47.47	50.39	53.60
122 Weak	42.84	42.44	50.15	58.27	45.25	44.56	42.44	41.50	52.96	53.74	50.56	41.93
129 Dr	66.80	49.44	62.61	62.17	59.10	52.51	50.32	45.05	66.55	55.37	58.66	43.82
136 Com	41.81	50.46	35.48	32.32	29.07	41.69	41.50	49.85	36.82	32.94	36.29	45.02
145 Proj	56.10	54.71	57.41	58.07	64.15	57.13	57.78	54.32	59.85	58.90	55.54	60.91
153 NAnt	56.27	36.23	66.97	66.32	63.60	57.65	57.85	41.65	53.76	63.00	65.98	42.55
161 ChrO	56.15	44.37	60.47	55.98	63.07	57.36	57.19	45.06	64.46	55.46	59.27	51.75
163 SimO	54.57	51.27	51.55	52.88	50.08	50.57	48.68	44.68	70.00	47.76	52.46	44.76
191 WOW	52.96	38.29	58.85	57.02	57.14	53.55	54.47	41.10	57.28	55.97	61.93	44.09
199 WOWs	46.32	36.44	57.34	55.68	58.19	52.67	55.68	42.32	47.49	57.68	60.19	46.32
207 WOW	59.39	41.15	64.90	61.31	61.46	56.68	56.79	42.40	60.74	57.88	64.69	46.19
220 AW	50.91	49.57	57.57	49.29	57.23	52.45	52.17	51.61	49.16	56.88	56.95	54.42
223 Hum	48.74	59.53	36.67	42.77	32.10	38.35	38.35	51.85	46.79	37.83	35.09	50.17

312 Answer questions as you would when feeling excited; 313 Answer questions as you would when feeling pleasant; 314 Answer questions as you would when feeling nervous; 315 Answer questions as you would when feeling tired; 316 Answer questions as you would when feeling angry; 317 Answer questions as you would when you are doing something that is dangerous; 318 Answer questions as you would when you are about to do something that is dangerous; 319 Answer questions as you would on the street under no-drug; 320 Simulated effect of an opiate; 321 Answer questions as you would when feeling bored; 322 Answer questions as you would when feeling afraid; 510 No-drug control for methadone study.

APPENDIX TABLE 2 (CONTINUED)

MEAN UNCORRECTED T-SCORES

CONDITION NO.	511	512	513	515	516	517	518	519
N	5	5	5	4	5	5	4	4
Scale No.	Meth 10 mg Week 1	Meth 60 mg Week 4	Meth 100 mg Week 10	Meth Week 4 Kick	Meth Week 8 Post	Meth Week 12 Post	Meth Week 16 Post	Meth Week 20 Post
101 Re	45.95	50.83	49.11	68.20	47.67	47.85	46.97	45.84
2 GDP	52.26	55.14	56.98	58.88	52.78	53.83	57.24	53.63
102 Pyp	64.02	63.11	63.41	67.83	66.15	67.68	73.54	68.59
10 MBG	54.52	53.16	52.62	38.09	50.72	48.28	43.52	49.63
108 SoW	56.88	57.24	54.74	58.39	56.88	58.31	65.97	63.74
111 Con	39.61	41.44	40.53	31.83	44.65	43.27	36.41	40.41
127 Mal	42.31	47.65	44.60	49.85	42.70	43.08	42.70	41.26
125 GDE	61.60	62.42	59.56	80.36	49.78	51.81	55.38	56.91
123 Tir	53.44	64.02	57.51	72.77	41.23	49.37	48.35	50.38
29 Imp	50.18	52.75	50.92	55.04	54.58	52.38	56.41	51.37
143 Int	61.39	57.59	55.47	44.27	57.59	55.90	54.31	59.07
115 Taste	59.80	60.91	56.46	69.53	48.68	48.68	47.29	51.46
4 PCAG	49.02	56.24	53.84	73.19	44.20	47.64	49.54	46.96
7 AG	43.10	46.03	47.01	62.38	53.84	51.89	57.50	51.40
11 MG	46.58	48.59	48.99	53.22	43.73	43.36	41.14	40.64
12 BG	56.65	50.85	53.02	29.03	59.54	54.47	50.76	55.74
17 CS	44.80	59.66	57.10	75.81	44.80	50.95	51.46	46.98
19 Ex	52.14	47.50	51.63	42.85	55.24	45.95	48.66	48.01
21 LSD	46.56	48.32	49.50	69.96	54.80	51.27	53.77	50.09
47 IT	48.67	51.94	52.15	67.66	45.63	48.02	49.16	48.35
48 IF	38.69	42.44	44.31	55.71	38.69	39.94	47.12	41.66
52 Mar	48.57	48.57	47.02	57.08	43.38	47.02	45.47	40.63
55 AWS	46.20	51.73	48.97	68.07	46.68	48.97	46.86	45.51
87 Ef	54.10	48.97	47.86	23.88	53.43	50.76	48.70	51.48
106 Pop	37.01	35.68	35.68	21.21	37.80	34.35	33.49	36.81
112 Cr	50.59	47.57	48.48	42.15	48.48	50.89	47.80	45.92
122 Weak	43.45	52.05	50.53	71.52	44.97	46.99	50.66	45.60
129 Dr	52.16	53.83	50.50	68.43	42.99	42.16	45.49	43.41
136 Com	42.31	40.76	39.99	23.44	41.54	38.83	30.70	34.09
145 Proj	61.98	63.04	65.18	62.51	60.91	63.04	74.51	70.95
153 NAnt	49.59	53.10	51.34	76.28	48.58	50.34	50.84	49.27
161 ChrO	59.65	70.84	66.89	67.72	53.07	48.46	57.84	53.73
163 SimO	54.09	57.29	55.69	58.35	44.23	45.56	46.70	46.70
191 WOW	46.08	59.52	55.54	73.45	46.83	47.57	48.26	47.01
199 WOWe	41.87	59.02	58.38	67.75	50.13	49.49	43.93	46.32
207 SOW	50.14	55.07	54.88	80.00	47.57	49.74	53.59	50.63
220 AW	49.99	52.39	47.59	55.39	56.12	55.85	55.72	53.39
223 Hum	47.21	44.74	47.70	32.89	47.70	47.70	47.70	51.41

511 Methadone-10 mg after 1 week of chronic administration; 512 Methadone-60 mg level after four weeks of chronic administration; 513 Methadone-100 mg level after 10 weeks of chronic administration; 515 Methadone-fourth week after complete stopping of drug administration; 516 Methadone-eighth week after complete stopping of drug administration; 517 Methadone-12th week after complete stopping of drug administration; 518 Methadone-16th week after complete stopping of drug administration; 519 Methadone-20th week after complete stopping of drug administration.

APPENDIX TABLE 2 (CONTINUED)

MEAN UNCORRECTED T-SCORES

CONDITION NO.	901	902	902 + 903 + 904	903	904
N	27	30	93	31	32
Scale No.	Norm	Norm Seco 200 mg	Ave of 902, 903, 904	Norm Mepr 800 mg	Norm Seco 100 mg+ Mepr 400 mg
101 Re	43.60	48.99	48.13	47.09	48.34
2 GDP	41.89	46.48	46.04	45.95	45.72
102 Pyp	43.94	47.08	47.18	46.24	48.17
10 MBG	40.78	46.24	43.97	42.19	43.56
108 SoW	52.01	53.62	52.39	51.34	52.26
111 Con	40.73	37.10	38.36	39.00	38.90
127 Mal	39.59	36.46	36.90	37.34	36.86
125 GDE	57.10	68.94	65.78	62.21	66.27
123 Tir	48.16	61.58	61.27	59.87	62.35
29 Imp	44.81	49.14	47.98	46.37	48.46
143 Int	42.52	44.27	44.29	44.84	43.74
115 Taste	45.79	52.75	51.31	50.47	50.76
4 PCAG	47.33	57.05	57.00	55.78	58.14
7 AG	50.95	56.77	54.10	52.43	53.23
11 MG	38.57	42.08	42.35	42.47	42.47
12 BG	42.83	39.21	39.06	39.59	38.43
17 CS	50.79	52.74	56.38	58.25	58.02
19 Ex	43.33	43.97	41.27	39.77	40.19
21 LSD	49.88	46.85	46.32	46.19	45.95
47 IT	42.48	49.73	48.50	47.24	48.58
48 IF	56.08	59.82	57.68	55.83	57.47
52 Mar	49.92	50.12	48.96	48.61	48.26
55 AWS	43.08	48.36	47.73	46.95	47.88
87 Ef	44.10	41.73	40.41	40.05	39.53
106 Pop	44.35	44.84	43.47	42.42	43.19
112 Cr	40.93	42.65	43.69	44.29	44.08
122 Weak	46.28	54.83	52.81	49.44	54.15
129 Dr	54.00	71.06	65.22	59.35	65.43
136 Com	43.88	38.96	40.86	42.99	40.55
145 Proj	49.84	52.79	51.92	51.01	51.95
153 NAnt	50.60	57.50	57.81	56.88	59.01
161 ChrO	46.53	48.35	47.53	46.61	47.66
163 SimO	42.42	52.49	49.87	47.52	49.69
191 WOW	47.87	55.04	54.49	53.42	55.03
199 WOWs	48.54	48.44	50.60	51.14	52.16
207 SOW	46.62	54.65	53.18	51.64	53.29
220 AW	40.83	44.16	43.99	43.36	44.43
223 Hum	56.57	55.36	53.70	51.85	53.95

901 Normal Ss, no-drug control for condition 902, 903, and 904; 902 Normal Ss, Secobarbital-200 mg; 902 + 903 + 904 Normal Ss; 903 Normal Ss, meprobamate -1600 mg; 904 Normal Ss, meprobamate-800 mg plus secobarbital-100 mg.

APPENDIX TABLE 3
T-SCORES CORRECTED FOR SCALES
127, 102, 207 & 87

CONDITION NO.	00+91	01+150	14	15	16	17	18	19	20	21	22	22+24
N	342	257	31	30	18	18	18	17	147	15	28	57
Scale No.	No Drug	Pla	No Drug	Pla	MS 15 mg/ 70 kg	MS 30 mg/ 70 kg	Pent 125 mg/ 70 kg	Pent 250 mg/ 70 kg	MS 20 mg	MS 10 mg	Cyc .6 mg/ 70 kg	Ave of 22 & 24
101 Re	47.3	46.9	48.1	46.9	47.3	47.0	46.8	46.1	45.7	46.2	46.0	45.8
2 GDP	47.7	47.7	48.9	48.3	47.6	49.4	50.3	49.5	45.6	45.5	47.1	46.9
102 Pyp	67.3	68.1	69.4	65.7	66.1	69.4	69.3	67.6	67.7	64.9	67.0	66.7
10 MBG	46.5	46.6	47.6	47.9	53.3	53.7	50.9	51.6	54.0	51.5	49.4	49.2
108 SoW	57.2	57.9	56.0	56.6	50.1	53.3	57.4	54.7	53.1	53.4	57.9	57.9
111 Con	43.9	42.7	45.3	45.0	45.5	44.5	41.9	45.9	43.5	39.3	44.4	44.3
127 Mal	48.1	49.6	48.5	45.0	46.3	46.1	47.0	45.2	48.8	51.5	48.0	48.3
125 GDE	57.1	60.1	56.5	58.7	61.3	63.3	60.9	61.3	66.3	69.4	65.7	66.9
123 Tir	48.1	49.3	48.7	51.6	53.5	52.3	57.2	56.8	52.3	50.7	54.2	54.0
29 Imp	45.3	44.9	47.2	46.3	45.8	48.0	49.8	48.5	44.6	45.9	46.1	45.7
143 Int	49.2	49.5	49.4	49.5	52.2	51.9	53.2	51.9	49.4	50.9	54.4	54.1
115 Taste	51.1	53.4	51.5	56.2	59.9	60.8	55.2	57.8	61.6	65.4	59.4	60.5
4 PCAG	47.7	48.2	48.2	49.5	51.1	50.2	52.7	52.2	48.7	47.5	50.2	49.8
7 AG	50.4	50.0	52.5	50.2	49.0	49.4	50.1	50.7	48.7	46.5	50.5	50.8
11 MG	44.2	44.0	45.0	45.0	50.5	48.7	47.5	47.1	50.4	48.0	43.0	43.9
12 BG	48.9	48.4	49.8	50.7	49.2	47.9	48.6	48.8	47.6	46.2	48.0	48.3
17 CS	50.4	50.7	50.0	50.5	47.7	46.3	52.4	50.9	45.7	45.1	48.7	47.4
19 Ex	50.4	50.4	50.0	50.1	54.0	53.2	47.4	47.0	53.7	53.1	50.2	50.0
21 LSD	50.8	50.3	49.6	48.5	47.7	48.0	44.4	44.4	49.2	50.9	47.1	47.5
47 IT	48.3	48.6	47.8	47.3	47.4	47.8	48.3	45.9	48.4	48.3	48.4	47.9
48 IF	50.5	50.7	51.6	50.3	50.2	49.2	50.5	48.9	49.7	48.2	49.8	49.5
52 Mar	55.5	55.2	54.9	55.6	53.6	52.5	50.9	49.3	52.8	56.9	53.6	55.0
55 AWS	47.4	46.9	48.1	47.0	47.3	46.5	47.0	47.0	45.1	46.5	45.4	45.2
87 Ef	44.3	43.1	46.5	45.2	49.8	49.5	45.0	47.6	50.9	46.9	46.6	45.0
106 Pop	44.1	43.8	45.7	45.2	47.4	46.3	47.1	46.6	45.6	44.2	46.0	46.6
112 Cr	44.3	43.4	44.6	44.0	46.4	44.8	46.5	45.6	43.6	41.2	43.7	43.7
122 Weak	46.6	46.5	47.0	47.0	48.2	46.4	47.0	47.3	48.8	47.3	44.6	44.6
129 Dr	53.0	55.1	53.1	53.6	55.0	57.4	57.4	57.7	59.3	60.8	60.5	61.8
136 Com	42.2	42.5	41.6	41.0	44.4	43.1	39.0	41.7	44.7	42.2	42.3	41.8
145 Proj	53.6	53.7	53.8	55.3	51.1	53.8	56.8	54.8	49.9	51.6	55.4	54.2
153 NAnt	49.2	49.4	49.9	49.5	48.2	48.8	50.7	51.8	46.0	46.0	52.2	53.0
161 ChrO	49.6	49.5	49.0	50.8	48.7	49.3	48.1	48.4	48.9	48.7	49.2	48.7
163 SimO	47.3	48.6	47.1	49.8	57.2	57.2	53.4	54.4	57.3	55.9	52.2	53.0
191 WOW	48.6	49.0	47.9	48.2	49.3	48.1	50.5	49.1	47.9	47.3	48.4	48.5
199 WOWs	46.7	45.0	44.5	43.8	45.5	44.6	45.3	45.6	41.7	41.1	42.0	40.9
207 SOW	42.6	43.t	40.4	42.6	45.2	45.1	45.2	47.7	48.1	46.2	51.8	53.7
220 AW	46.8	46.6	48.4	45.5	49.3	48.3	49.7	51.1	44.6	48.2	47.1	47.4
223 Hum	51.3	51.8	50.6	52.1	51.0	51.6	49.4	49.5	54.8	52.9	54.2	54.3

00+91 No-drug; 01 +150 Placebo; 14 No-drug; 15 Placebo; 16 Morphine - 15 mg/70Kg; 17 Morphine - 30 mg/70 Kg; 18 Pentobarbital - 125 mg/70 Kg; 19 Pentobarbital 250 mg/70 Kg; 19+31 Pentobarbital - 250 mg**; 20 Morphine - 20 mg; 21 Morphine - 10 mg; 22 Cyclazocine - .6 mg/70 Kg; 22+24 Average of condition 22 and 24;

** given after condition 904

APPENDIX TABLE 3 (CONTINUED)
CORRECTED T-SCORES

CONDITION NO.	23	23+25	24	25	26	26+27	27	28	29	30	31	37
N	30	58	29	28	89	198	109	219	36	189	30	4
Scale No.	Cyc 1.2 mg/ 70 kg	Ave of 23 & 25	Nal 16 mg/ 70 kg	Nal 32 mg/ 70 kg	MI Males	Ave of 26 & 27	MI Females	Norm	Norm	Pent 200 mg	Pent 250 mg	MS 20 mg
101 Re	45.5	45.3	45.7	45.1	49.2	50.0	50.7	49.8	49.5	45.3	45.1	48.0
2 GDP	44.9	45.1	46.8	45.4	51.3	52.8	56.1	50.1	48.7	47.0	45.6	44.9
102 Pyp	65.1	64.8	66.4	64.6	45.9	42.3	39.4	36.0	37.3	67.0	65.3	63.0
10 MBG	49.0	48.9	49.0	48.9	50.8	51.3	51.7	49.6	49.3	48.4	50.7	50.0
108 SoW	60.8	59.4	58.0	57.8	58.7	59.4	60.1	46.8	44.8	58.7	59.0	57.9
111 Con	41.9	42.4	44.1	43.0	45.7	44.5	43.4	45.2	49.1	42.0	41.9	47.0
127 Mal	48.0	49.0	48.6	50.0	57.6	57.6	57.5	34.6	30.6	48.8	47.4	47.9
125 GDE	74.6	74.3	68.1	74.0	51.1	50.8	50.6	51.2	48.9	64.3	69.5	62.6
123 Tir	53.3	54.2	53.8	55.1	51.6	52.4	53.1	51.3	51.0	53.8	56.4	52.0
29 Imp	43.5	43.9	45.3	44.3	52.3	53.3	54.2	50.6	48.4	44.6	47.4	41.0
143 Int	53.5	52.4	53.8	51.2	50.4	53.9	56.8	49.9	49.2	49.3	48.5	49.7
115 Taste	62.6	63.6	61.5	64.7	49.4	50.0	50.5	50.4	51.6	55.4	59.2	59.7
4 PCAG	49.3	50.4	49.5	51.5	51.0	51.1	51.3	50.4	49.9	50.4	51.7	46.5
7 AG	52.3	51.8	51.2	51.3	48.3	47.2	46.2	47.5	47.6	49.9	52.2	41.0
11 MG	40.4	41.8	44.8	43.2	47.2	48.7	49.9	50.6	58.5	43.2	43.8	46.8
12 BG	46.2	46.3	48.7	46.3	49.2	49.7	50.0	48.5	49.2	47.9	48.2	47.3
17 CS	43.2	44.7	46.1	46.3	49.6	50.2	50.6	50.4	50.6	49.5	47.3	47.6
19 Ex	51.7	51.4	49.9	51.2	49.2	48.8	48.5	48.5	47.9	49.2	49.8	53.7
21 LSD	48.9	49.0	47.8	49.1	48.5	48.7	48.8	48.8	48.1	45.9	44.6	50.2
47 IT	49.2	48.8	47.4	48.3	50.0	50.7	51.2	50.1	48.6	47.6	47.4	50.7
48 IF	49.0	49.3	49.1	49.5	51.7	50.5	49.4	48.5	50.1	51.0	52.8	47.0
52 Mar	54.7	53.8	56.4	52.8	51.4	50.3	49.3	48.2	46.9	53.8	53.5	54.1
55 AWS	44.1	44.2	45.1	44.4	49.4	50.5	51.4	50.0	49.9	45.0	44.3	46.3
87 Ef	45.3	45.1	43.4	44.9	53.8	54.5	55.0	44.1	47.3	45.3	46.4	45.7
106 Pop	46.3	46.2	47.2	46.0	50.9	51.0	51.1	50.6	49.5	44.9	46.1	47.6
112 Cr	41.9	42.5	43.7	43.2	50.3	51.1	51.7	55.3	54.2	44.0	42.7	39.5
122 Weak	45.4	45.0	44.7	44.7	49.6	49.8	50.0	47.1	48.8	48.0	49.4	48.0
129 Dr	69.8	67.6	63.0	65.4	50.8	48.8	47.2	48.7	47.1	60.9	69.7	55.6
136 Com	40.3	39.9	41.3	39.4	44.1	42.3	40.8	55.3	56.0	41.2	41.6	46.2
145 Proj	54.8	54.0	53.9	53.1	56.0	58.4	60.4	49.6	49.4	53.9	53.3	53.5
153 NAnt	56.5	56.0	53.7	55.4	50.3	51.1	51.8	50.3	49.5	49.6	49.9	46.5
161 ChrO	48.8	47.4	48.2	45.9	52.0	52.4	52.7	50.1	49.3	48.9	47.9	50.8
163 SimO	57.0	56.8	53.9	56.7	51.0	50.9	50.9	49.0	49.5	52.0	55.3	53.4
191 WOW	48.8	48.4	48.5	47.9	49.5	50.1	50.6	50.0	50.2	48.2	47.9	46.0
199 WOWs	35.4	36.6	39.7	38.0	49.8	49.8	49.8	51.0	50.3	43.0	40.7	42.5
207 SOW	61.8	62.4	55.7	63.0	49.9	51.7	53.1	47.1	46.1	48.9	49.9	38.0
220 AW	46.2	46.0	47.7	45.8	50.5	53.5	55.9	50.3	49.9	44.9	44.7	47.1
223 Hum	55.2	55.8	54.3	56.4	49.0	46.7	44.7	50.1	50.6	54.2	55.7	56.5

23 Cyclazocine - 1.2 mg/70 Kg; 23+25 Average of condition 23 and 25; 24 Nalorphine - 16 mg/70 Kg; 25 Nalorphine - 32 mg/70 Kg; 26 Mentally Ill, males; 26+27 Mentally Ill, conditions 26 and 27; 27 Mentally Ill, females; 28 Normal college students, males and females combined; 29 Normal college students; 30 Pentobarbital - 200 mg; 31 Pentobarbital - 250 mg; 37 Morphine - 20 mg.

APPENDIX TABLE 3 (CONTINUED)
CORRECTED T-SCORES

CONDITION NO.	39	40	42	43	45	45+46	46	47	48	50	51	60
N	4	173	4	13	19	38	19	5	5	49	172	209
Scale No.	MS Day 5 Withd	Cpz	MS Day 19 Kick	Schiz	Scop 5 mcg/kg	Ave of 45 & 46	Scop 7.5 mcg/kg	Her Day 4	Her Day 21	LSD 1 mcg/kg	LSD 1.5 mcg/kg	Amph 30 mg
101 Re	43.8	44.7	43.1	50.5	44.2	44.6	45.0	45.8	44.1	45.2	45.0	45.3
2 GDP	42.4	45.5	41.7	51.5	45.8	45.5	45.3	44.2	45.4	44.6	42.4	45.6
102 Pyp	62.2	67.9	62.1	45.4	65.3	67.5	69.8	62.7	61.8	65.0	66.5	66.6
10 MBG	48.8	46.5	47.8	52.7	49.4	49.6	49.7	49.8	47.9	48.9	46.8	51.5
108 SoW	59.1	57.9	64.1	61.2	58.6	59.1	59.7	54.6	57.2	56.9	56.7	55.7
111 Con	51.9	42.0	48.2	50.5	47.8	46.8	45.9	41.4	45.4	43.4	39.4	42.2
127 Mal	47.0	48.7	46.0	54.7	45.7	44.0	42.2	43.1	46.1	47.3	48.0	47.5
125 GDE	51.4	63.7	52.2	50.2	67.9	69.9	71.9	59.3	60.9	65.5	68.4	65.9
123 Tir	47.4	56.1	49.5	50.8	56.9	57.7	58.5	51.7	52.5	47,8	42.0	47.4
29 Imp	36.4	44.0	38.9	49.6	42.8	43.3	43.9	44.2	39.8	44.6	43.0	44.5
143 Int	53.4	49.5	56.5	52.6	51.5	51.5	51.6	40.0	43.3	48.4	48.9	48.3
115 Taste	48.8	58.0	48.2	49.9	68.6	71.2	73.8	50.8	54.4	57.9	57.6	61.6
4 PCAG	46.2	52.0	45.7	49.9	50.5	50.9	51.2	50.6	49.4	47.2	43.0	46.8
7 AG	47.0	48.6	49.5	48.8	49.8	52.2	54.5	48.8	48.5	51.9	48.6	48.7
11 MG	40.1	41.9	38.5	48.5	44.2	43.7	43.2	45.6	44.7	42.6	39.4	44.1
12 BG	52.9	48.2	54.5	50.6	48.3	47.7	47.1	46.1	50.5	47.9	48.0	50.7
17 CS	53.4	57.3	52.9	49.0	52.1	52.0	51.8	50.1	51.0	45.7	42.4	48.1
19 Ex	44.6	45.9	42.9	53.0	48.6	49.4	50.1	54.1	56.2	57.6	63.2	56.6
21 LSD	47.3	46.5	47.9	49.7	48.9	48.3	47.6	49.7	47.0	56.5	64.0	51.6
47 IT	47.6	47.8	46.5	53.9	47.1	48.2	49.2	48.0	45.1	49.2	48.7	48.8
48 IF	44.5	49.0	47.1	50.8	52.3	50.6	48.9	52.0	50.8	51.4	49.0	51.2
52 Mar	53.7	53.2	51.6	49.5	58.3	59.2	60.1	55.5	51.7	50.4	49.9	54.0
55 AWS	44.2	44.7	44.9	51.2	44.4	44.8	45.1	45.7	44.0	44.1	43.4	44.6
87 Ef	46.3	43.3	42.6	56.0	46.8	46.2	45.7	50.4	45.3	48.6	47.0	51.7
106 Pop	44.7	44.3	47.5	51.3	45.3	45.0	44.7	44.7	45.1	44.8	45.1	44.6
112 Cr	36.7	43.0	39.0	49.6	39.5	40.0	40.4	38.4	40.9	41.3	40.8	42.3
122 Weak	52.2	49.4	52.2	48.2	49.1	48.3	47.6	46.8	49.5	48.9	45.9	49.2
129 Dr	47.2	56.8	51.3	52.5	60.5	61.3	62.2	56.3	57.5	61.1	62.3	58.1
136 Com	41.2	42.0	40.4	48.3	40.8	39.8	38.8	41.3	37.1	42.4	43.3	43.6
145 Proj	57.4	52.8	59.3	57.1	56.5	55.2	53.9	48.9	49.3	52.3	50.0	50.8
153 NAnt	44.5	49.6	47.0	50.9	50.8	52.0	53.3	46.0	46.4	48.6	48.1	46.4
161 ChrO	55.2	50.0	51.6	51.5	47.6	48.8	50.1	60.7	63.1	48.2	45.9	50.4
163 SimO	47.3	50.2	43.9	53.2	53.6	54.6	55.7	53.3	53.5	53.8	52.9	54.1
191 WOW	49.6	48.5	46.1	54.0	47.3	48.7	50.1	52.2	51.7	48.5	46.9	47.3
199 WOWs	53.7	45.2	46.7	55.4	43.1	43.0	43.0	50.6	51.5	40.7	39.8	42.3
207 SOW	45.2	50.0	49.6	50.3	56.4	56.8	57.2	45.7	56.1	52.5	55.8	44.6
220 AW	39.3	43.7	39.9	50.8	46.0	46.8	47.5	40.1	38.6	42.6	42.2	44.7
223 Hum	56.4	54.6	52.9	50.0	52.7	53.5	54.2	57.5	57.6	57.2	59.9	54.4

39 Opiate withdrawal - 5th day of dose reduction; 40 Chlorpromazine -(Day 1, 25 mg qid; Day 2, 50 mg qid; Day 3, 75 mg); 42 Morphine, 19th day after dose reduction; 43 Schizophrenics; 45 Scopolamine - 5 mcg/Kg; 45+46 Average of 45 and 46; 46 Scopolamine - 7.5 mcg/Kg; 47 Heroin - 4th day on chronic administration; 48 Heroin - Day 21 on chronic administration; 50 LSD - 1 mcg/Kg; 51 LSD - 1.5 mcg/Kg; 60 Amphetamine; Benzedrine - 30 mg.

APPENDIX TABLE 3 (CONTINUED)

CORRECTED T-SCORES

CONDITION NO.	61	70	71	80	81	82	83	85	86 + 87 88	89	90	91
N	30	44	170	75	90	31	66	49	148	15	18	22
Scale No.	Amph 15 mg	Py 60 mg	Py 90 mg	Alc 2.12 of 30% Alc/ Kg	Alc 3	Alc 4.43	Alc 1.1	Alco Day 2 Withd	Alco Weeks 1, 2, 3	Norm Male	Norm Female	No Drug
101 Re	46.1	45.5	45.0	44.4	44.2	44.2	45.5	52.4	52.1	48.8	46.7	49.1
2 GDP	46.1	46.1	45.7	44.3	44.9	45.1	45.8	50.5	51.3	48.4	47.9	49.6
102 Pyp	66.0	66.2	65.8	65.6	64.6	64.8	65.8	54.9	52.6	40.1	37.8	65.8
10 MBG	48.6	48.4	48.3	48.9	49.6	50.1	48.1	52.7	52.5	48.8	47.8	48.1
108 SoW	56.8	58.9	59.4	58.1	58.1	60.4	57.6	40.5	39.4	53.2	49.4	57.3
111 Con	42.8	44.3	40.4	42.3	40.5	40.4	38.9	48.1	46.3	47.0	43.8	42.2
127 Mal	47.7	50.5	49.1	48.6	47.3	46.1	48.0	56.9	60.4	36.8	33.6	47.6
125 GDE	63.9	63.1	68.4	68.5	72.1	73.1	68.7	51.6	49.8	50.3	53.1	57.9
123 Tir	45.2	51.3	51.2	53.4	52.9	55.0	51.3	49.7	50.1	50.2	50.9	48.9
29 Imp	45.2	44.2	43.7	45.4	45.7	42.0	45.4	54.4	54.6	48.4	51.0	50.6
143 Int	48.3	48.6	48.7	48.6	48.3	52.1	48.4	51.8	47.8	49.1	50.7	49.9
115 Taste	59.9	59.0	60.3	56.8	57.0	60.3	56.6	53.6	49.5	49.8	49.7	53.4
4 PCAG	46.6	48.5	48.5	50.1	50.7	51.6	48.8	49.1	50.1	50.6	47.8	48.9
7 AG	51.0	52.4	50.9	60.7	63.6	60.4	58.1	51.0	54.0	48.4	44.7	49.7
11 MG	43.9	42.6	41.5	41.3	40.6	41.5	40.8	55.6	55.1	45.1	47.7	47.5
12 BG	49.7	49.3	47.1	47.9	47.5	47.5	48.7	50.9	49.7	49.1	48.0	49.5
17 CS	50.0	51.2	50.3	46.0	44.1	46.6	45.4	48.9	48.3	51.8	51.9	51.0
19 Ex	53.9	51.6	50.9	51.0	51.7	49.3	53.4	50.7	51.4	47.5	47.2	50.1
21 LSD	52.5	49.0	49.9	46.4	45.8	45.1	46.8	51.9	51.5	51.3	49.0	50.8
47 IT	47.7	48.4	48.2	46.9	46.7	47.3	48.5	50.6	50.3	49.1	48.6	48.6
48 IF	51.0	50.6	50.6	51.6	52.1	48.6	52.0	46.0	49.6	48.7	46.3	49.3
52 Mar	53.5	56.5	56.0	51.8	52.0	51.0	53.3	46.8	47.9	50.8	42.8	55.1
55 AWS	45.8	44.9	44.4	44.1	43.4	43.8	44.7	54.4	51.4	49.3	47.3	49.3
87 Ef	47.6	45.7	44.5	45.3	45.3	42.8	46.0	53.6	54.4	39.1	39.4	46.1
106 Pop	45.0	44.8	44.5	45.6	45.8	46.1	44.5	50.5	51.9	49.0	50.6	43.9
112 Cr	43.5	44.1	42.4	42.1	41.9	44.5	41.6	54.2	52.9	47.2	51.8	44.4
122 Weak	48.4	46.9	48.7	48.1	49.9	50.6	47.8	49.2	49.0	45.8	47.7	45.6
129 Dr	56.7	58.8	61.3	70.1	73.2	73.9	68.5	54.2	53.0	48.8	50.7	52.0
136 Com	44.2	43.4	41.2	41.8	39.4	38.8	41.2	58.0	55.2	46.1	52.1	38.8
145 Proj	52.2	53.7	53.0	51.7	51.5	53.1	51.6	37.4	37.5	52.9	53.0	55.7
153 NAnt	47.3	48.6	49.3	49.5	49.5	51.8	49.9	50.2	50.0	50.2	48.6	51.4
161 ChrO	48.7	49.6	49.4	49.0	48.3	48.8	49.7	46.9	48.2	50.7	48.9	49.7
163 SimO	50.6	50.9	52.9	52.0	53.7	54.8	52.1	51.9	51.2	47.6	47.2	48.5
191 WOW	48.0	48.4	47.8	47.4	46.9	48.5	47.1	53.4	52.0	48.7	48.8	49.7
199 WOWs	42.7	42.9	40.5	41.2	39.4	38.2	41.7	54.0	52.4	50.8	51.5	48.3
207 SOW	44.9	47.4	49.1	49.0	50.8	54.1	45.8	68.3	51.8	42.1	47.7	42.7
220 AW	46.4	45.8	45.3	45.0	44.8	45.8	45.4	58.8	47.5	47.5	46.8	50.5
223 Hum	53.1	54.6	55.9	56.9	59.8	56.7	56.3	47.4	51.6	50.3	52.2	48.8

61 Amphetamine, Benzedrine - 15 mg; 70 Pyrahexyl - 60 mg; 71 Pyrahexyl - 90 mg; 80 Alcohol - 2.12 cc of 30% alcohol/Kg; 81 Alcohol - 3.0 cc of 30% alcohol/Kg; 82 Alcohol - 4.43 cc of 30% alcohol/ Kg; 83 Alcohol - 1.1 cc of 30% alcohol/Kg; 85 Alcoholics - day 2 of withdrawal from alcohol; 86 + 87 + 88 Alcoholics - 1, 2, and 3 weeks after withdrawal of alcohol; 89 Normal college, male by Yamahiro; 90 Normal college, female by Yamahiro; 91 No Drug.

APPENDIX TABLE 3 (CONTINUED)

CORRECTED T-SCORES

CONDITION NO.	94	108	109	110 (Gp 1)	110 (Gp 2)	115	116	117	118	123 (Gp 1)	123 (Gp 2)	123
N	171	11	12	42	37	6	6	6	6	51	73	124
Scale No.	Crim	Cyc 3 mg/ 70 Kg	Nal 8 mg/ 70 Kg	No Drug	No Drug	No Drug	Cyc 6 mg/ 70 kg Chron	Cyc 6 mg/ 70 kg Chron	Cyc Day 5 Withd	Ad-Gp Withd	Ad-Gp No Withd	Ad-Gp Total
101 Re	50.3	45.5	42.8	47.9	47.8	51.2	50.1	48.8	47.1	46.3	48.6	47.6
2 GDP	48.9	48.0	45.6	47.3	47.4	51.6	51.8	46.9	48.3	43.0	45.4	44.4
102 Pyp	59.6	66.4	67.9	65.9	65.3	72.5	70.9	69.7	72.3	60.1	60.8	60.6
10 MBG	49.0	47.1	46.9	47.7	47.5	48.9	49.2	46.8	46.6	48.2	48.5	48.4
108 SoW	49.4	60.3	59.0	54.9	56.4	58.7	55.5	53.1	52.0	50.0	50.0	50.0
111 Con	65.4	38.3	38.7	47.7	47.0	44.6	44.8	45.1	42.3	53.2	54.1	53.7
127 Mal	55.8	45.8	48.7	45.9	46.4	47.1	48.4	51.3	51.3	47.0	50.7	49.2
125 GDE	45.5	66.0	72.3	54.4	55.5	52.3	54.3	52.6	50.7	50.4	50.5	50.5
123 Tir	48.3	53.4	55.2	49.0	49.5	51.0	51.1	46.9	49.5	47.6	49.0	48.4
29 Imp	46.2	44.4	42.0	45.8	46.7	46.6	48.6	43.1	44.0	45.0	45.0	45.0
143 Int	49.6	55.4	53.3	49.9	49.7	47.0	47.0	48.7	50.3	47.7	46.6	47.0
115 Taste	50.2	58.9	60.9	53.1	52.6	51.2	52.2	50.3	45.0	49.9	48.4	49.0
4 PCAG	48.9	48.9	49.1	48.8	49.1	49.3	51.1	48.7	51.2	47.3	50.2	49.0
7 AG	50.5	50.3	50.7	49.4	50.1	48.0	56.5	53.3	45.6	52.8	51.2	51.8
11 MG	51.0	45.3	40.2	43.9	44.1	45.8	48.1	45.8	49.4	44.1	46.0	45.2
12 BG	51.5	49.2	49.3	50.5	49.9	49.4	49.5	50.3	50.2	51.2	49.0	49.9
17 CS	50.3	48.8	48.5	50.5	50.5	50.1	52.7	52.0	52.5	51.6	51.3	51.4
19 Ex	51.0	46.7	48.7	51.4	51.4	52.0	48.2	50.8	47.6	51.2	49.0	48.6
21 LSD	50.7	47.6	48.4	50.8	50.8	52.9	50.7	49.2	47.3	52.5	50.5	51.3
47 IT	50.5	47.0	46.2	48.6	48.6	48.8	49.1	48.3	46.8	46.8	47.6	47.3
48 IF	49.0	47.5	51.4	50.0	50.6	49.0	50.5	49.1	43.7	49.3	53.4	51.7
52 Mar	51.4	53.2	51.2	53.6	54.7	56.4	55.5	57.0	52.5	49.7	50.6	50.2
55 AWS	50.5	45.1	42.9	47.5	47.2	49.6	50.3	47.5	47.8	46.0	47.9	47.1
87 Ef	50.8	42.3	44.3	47.0	46.1	43.9	44.9	48.0	45.3	45.7	48.2	47.2
106 Pop	50.3	43.5	44.8	46.3	45.8	46.3	45.8	44.3	46.0	48.1	46.6	47.2
112 Cr	48.9	44.2	40.8	40.6	41.3	39.0	44.5	41.4	45.7	34.8	35.2	35.0
122 Weak	53.1	42.2	45.0	48.1	48.9	47.9	48.3	46.1	49.4	59.8	58.8	59.2
129 Dr	50.0	55.8	63.8	49.8	51.0	51.3	52.2	53.1	49.4	46.2	50.1	48.5
136 Com	55.4	41.1	39.8	42.0	41.1	34.1	42.3	42.7	46.4	39.8	40.8	40.4
145 Proj	51.4	57.3	54.6	53.7	55.1	53.6	55.2	52.9	51.1	47.4	47.7	47.5
153 NAnt	49.5	51.4	52.9	49.8	49.7	52.4	51.7	49.2	51.1	48.0	49.0	48.6
161 ChrO	49.3	51.6	51.4	50.8	51.1	53.9	55.5	58.1	47.3	47.6	49.1	48.5
163 SimO	50.7	50.0	52.7	48.6	48.8	49.3	50.1	47.0	47.9	48.6	48.8	48.7
191 WOW	51.4	47.7	48.9	46.8	48.5	48.6	50.9	50.6	50.4	48.6	48.8	48.7
199 WOWs	49.8	43.0	40.5	46.1	47.8	48.6	51.9	52.3	59.8	46.4	47.8	47.2
207 SOW	53.0	49.9	52.9	42.5	42.4	40.8	43.7	45.1	57.1	61.3	51.5	55.5
220 AW	49.9	46.1	42.6	47.4	45.6	50.6	51.2	48.7	47.6	45.0	45.7	45.4
223 Hum	49.3	52.0	58.2	52.0	52.2	48.8	50.5	52.3	51.0	55.7	52.6	53.9

94 Criminals; 108 Cyclazocine - .3 mg/70 Kg; 109 Nalorphine - 8 mg/70 Kg; 110 No-drug, group 1; 110 No-drug, group 2; 115 No-drug; 116 Cyclazocine - chronic at 6 mg/70 Kg; 117 Cyclazocine - chronic stabilization at 6 mg/70 Kg; 118 Cyclazocine - Day 5 withdrawal; 123 General population addicts, withdrawal of opiates, group 1; 123 General population of addicts, no withdrawal of opiates, group 2; 123 Total general population of opiate addicts.

APPENDIX TABLE 3 (CONTINUED)

CORRECTED T-SCORES

CONDITION NO.	131	132	133	150	151 + 152 + 153	154	154 + 168	168	170	170 + 173	173	174
N	42	42	42	15	27	15	73	58	58	189	131	171
Scale No.	Sim Op Acute	Sim Op Chron	Sim Op Withd	No Drug	MS or Her Chr	MS or Her Day 10 Withd	Ave 154 + 168	Ad-Gp Withd	Ad-Gp No Drug	Ave 170 + 173	Ad No Drug	Sim No Drug Street
101 Re	45.9	45.6	43.8	51.6	44.5	36.0	44.9	47.2	47.8	48.4	48.7	48.5
2 GDP	46.2	45.9	43.1	49.9	45.8	35.8	43.2	45.2	46.3	47.0	47.2	47.8
102 Pyp	64.7	65.9	64.7	65.6	67.2	63.3	60.8	60.2	60.7	63.6	64.8	64.9
10 MBG	51.3	52.4	41.3	49.7	45.5	41.2	46.6	48.0	48.9	48.1	47.7	49.0
108 SoW	60.4	58.7	57.3	59.2	60.8	56.8	49.0	47.0	49.7	52.7	54.0	53.8
111.Con	43.0	44.1	43.5	44.4	44.9	47.8	52.5	53.8	51.3	50.2	49.7	49.0
127 Mal	43.8	44.7	46.4	47.4	47.9	46.9	46.4	46.2	45.1	46.6	47.3	45.6
125 GDE	64.6	63.7	59.6	58.1	56.1	47.8	47.6	47.6	50.2	52.0	52.8	53.3
123 Tir	51.1	50.9	42.6	51.8	48.2	47.1	47.6	47.7	47.9	47.5	47.3	47.3
29 Imp	45.7	45.9	40.5	44.6	41.1	38.7	45.1	46.7	45.5	45.7	45.8	46.0
143 Int	47.9	47.6	45.2	44.8	46.3	48.8	49.6	49.9	48.4	48.0	47.9	47.8
115 Taste	60.0	57.3	55.8	54.0	53.2	41.9	47.8	49.3	49.5	49.9	50.0	51.4
4 PCAG	50.5	50.6	45.9	51.3	47.8	43.5	47.0	47.9	48.8	49.2	49.4	47.7
7 AG	50.5	50.4	51.7	54.4	51.3	45.7	51.4	52.9	54.5	52.3	51.3	53.0
11 MG	46.2	47.4	39.8	45.8	42.5	33.6	44.3	47.0	45.6	45.9	45.9	46.1
12 BG	45.8	46.4	50.1	46.7	49.2	56.0	53.6	53.0	52.3	51.0	50.4	50.3
17 CS	48.9	48.6	44.9	51.6	55.2	52.1	51.4	51.3	50.7	50.5	50.4	48.9
19 Ex	54.5	53.6	51.0	50.0	48.4	44.1	48.9	50.2	50.6	51.0	51.2	51.9
21 LSD	48.7	47.8	52.9	51.0	47.8	48.2	51.6	52.5	50.5	51.0	51.1	52.5
47 IT	48.7	48.5	45.1	51.8	45.7	39.3	45.7	47.3	48.3	48.5	48.6	48.6
48 IF	52.9	50.6	53.4	53.2	51.4	51.7	50.2	49.7	52.4	52.5	52.5	50.8
52 Mar	56.2	54.0	55.9	57.3	51.9	43.9	45.3	45.7	49.5	52.4	53.6	52.6
55 AWS	44.5	44.8	42.5	51.4	44.5	36.5	44.8	47.0	47.1	48.0	48.4	47.9
87 Ef	53.9	54.1	51.4	42.9	46.4	48.5	48.5	48.5	50.5	48.1	47.1	48.9
106 Pop	44.1	44.2	41.5	46.7	44.3	46.4	47.3	47.5	47.4	46.6	45.7	46.8
112 Cr	37.5	37.8	33.2	41.8	37.6	34.5	40.5	42.0	38.4	41.5	42.9	42.9
122 Weak	50.8	51.0	49.7	52.0	53.0	51.2	55.7	56.9	55.7	51.5	49.6	50.1
129 Dr	59.4	58.8	52.3	53.3	50.3	44.2	47.6	48.4	48.8	50.4	51.1	51.1
136 Com	36.4	37.3	39.1	38.7	36.2	37.8	46.9	49.2	42.8	42.9	42.9	43.7
145 Proj	54.6	53.6	51.7	53.9	53.8	48.0	45.0	44.2	48.8	50.3	50.9	50.4
153 NAnt	48.1	48.2	45.5	52.2	48.5	43.1	45.9	46.6	47.6	49.1	49.7	49.0
161 ChrO	53.8	54.1	51.5	47.5	66.5	45.7	48.2	48.8	47.1	49.4	50.4	49.9
163 SimO	62.2	60.5	48.0	51.2	48.3	40.0	47.6	49.6	48.4	48.7	48.8	48.3
191 WOW	49.7	50.3	46.8	51.9	50.7	42.2	53.6	56.6	42.4	47.0	49.1	48.0
199 WOWs	44.0	46.0	49.3	47.8	51.9	48.7	56.8	58.9	43.6	47.3	48.8	46.4
207 SOW	53.7	53.8	76.0	38.9	50.3	73.5	63.0	60.3	50.4	47.4	46.1	42.9
220 AW	42.6	42.8	37.8	52.2	43.2	27.0	36.8	39.3	48.7	48.1	47.8	46.5
223 Hum	53.4	53.7	55.7	50.4	53.0	62.2	56.5	55.0	53.5	52.7	52.4	52.0

131 Opiate, simulation of the acute effect; 132 Opiate, simulation of the chronic effects of opiates; 133 Opiate, simulation of the withdrawal effects of opiates 150 No-drug; 151 + 152 + 153 Chronic effects of morphine (240 mg/day) or heroin (95 mg/day); 154 Morphine or heroin withdrawal, 10th day of dose reduction, strong opiate withdrawal; 154 + 168 Average of conditions 154 and 168; 168 Opiate withdrawal, weak in general population addicts; 170 No-drug control group for general population with weak opiate withdrawal; 170 + 173 No-drug; 173 No-drug - general control test for simulation studies up to condition 248; 174 No-drug, simulation of no-drug effect on the street, control for simulations up to 248.

APPENDIX TABLE 3 (CONTINUED)

CORRECTED T-SCORES

CONDITION NO.	177	178	179	180	181	182	183	183 + 209	184	185	186	187
N	10	10	10	10	10	10	50	99	43	36	32	9
Scale No.	Sim Weak Op	Sim Str Op	Sim Weak Op	Sim Str Op	Sim Weak Hook	Sim Str Hook	Sim Reef	Ave 183+ 209	Sim Coc	Sim GB	Sim PP	Sim LSD
101 Re	47.0	47.3	46.0	45.5	45.0	44.0	46.8	46.6	46.2	46.8	45.9	46.4
2 GDP	49.2	46.4	45.6	46.8	47.2	43.1	45.6	45.1	42.3	47.1	44.7	41.7
102 Pyp	64.5	65.7	67.9	65.5	66.4	66.3	60.3	60.6	61.0	63.1	59.7	54.9
10 MBG	50.6	50.8	49.1	53.8	50.9	49.0	52.6	52.8	48.8	49.4	50.9	49.8
108 SoW	59.2	56.6	64.0	55.5	56.5	59.3	58.2	57.6	55.2	61.7	56.7	55.3
111 Con	39.0	41.0	41.9	41.1	37.1	34.6	43.2	42.8	37.5	39.1	40.1	49.0
127 Mal	44.8	39.5	40.8	48.6	44.6	41.7	36.3	36.3	36.9	40.3	39.3	34.7
125 GDE	63.3	71.2	67.2	69.0	70.3	71.3	66.3	66.2	66.5	71.7	64.9	66.8
123 Tir	44.3	52.8	50.7	51.9	49.9	49.5	47.4	48.0	33.0	54.9	37.9	40.6
29 Imp	45.9	41.9	41.6	42.6	42.2	43.5	46.1	46.1	43.6	46.3	49.6	35.3
143 Int	48.5	46.9	44.1	47.1	44.1	41.0	44.8	44.4	42.6	41.9	46.0	43.3
115 Taste	55.5	67.2	60.7	58.6	60.4	52.2	60.3	60.0	58.1	60.4	59.4	63.8
4 PCAG	47.7	50.7	48.7	49.8	49.2	50.0	46.8	47.0	38.4	53.7	40.4	41.8
7 AG	48.8	42.3	53.1	49.9	52.9	46.0	54.1	53.3	51.1	54.0	50.7	45.3
11 MG	48.4	48.2	41.1	47.1	44.2	43.7	46.1	45.6	40.7	41.6	41.7	42.6
12 BG	47.1	44.4	47.2	43.2	44.2	41.4	47.5	47.3	48.8	41.8	50.8	51.0
17 CS	43.8	49.8	48.8	46.8	49.2	47.1	43.8	44.4	39.1	47.0	42.6	45.9
19 Ex	56.0	54.2	53.8	53.6	54.8	53.4	58.6	59.1	68.9	51.6	65.1	65.4
21 LSD	49.2	44.5	48.9	47.7	45.2	45.9	50.2	49.8	62.5	46.3	59.7	54.5
47 IT	47.7	52.8	47.2	50.0	48.4	48.3	48.7	48.7	48.1	51.1	47.6	53.7
48 IF	51.2	51.5	55.4	53.2	50.6	54.3	53.5	52.5	51.6	56.3	54.7	55.5
52 Mar	54.5	54.6	53.3	52.4	52.9	57.3	54.8	54.6	58.6	58.0	56.6	60.5
55 AWS	45.5	44.4	44.6	44.7	42.7	42.5	45.1	45.0	43.9	45.7	44.2	42.3
87 Ef	50.8	49.6	48.0	54.0	57.9	52.2	55.3	55.5	60.7	49.3	56.1	60.3
106 Pop	46.6	43.2	43.6	44.9	42.9	41.4	46.8	47.0	42.2	44.0	43.2	43.9
112 Cr	45.1	39.1	37.5	39.1	37.1	34.0	40.5	39.9	38.3	40.2	41.4	30.2
122 Weak	45.1	48.2	44.2	50.7	49.1	52.3	51.4	51.8	45.2	47.3	44.1	52.4
129 Dr	58.5	64.6	62.4	64.6	64.5	66.2	64.9	64.8	59.8	71.2	58.0	62.6
136 Com	38.8	41.2	33.8	37.8	38.8	37.6	40.0	39.7	42.3	36.0	42.2	40.2
145 Proj	54.9	53.1	56.2	50.3	51.2	51.8	51.4	51.1	46.9	53.8	49.0	46.7
153 NAnt	47.4	48.6	50.2	48.0	47.2	49.6	48.6	48.5	44.2	52.2	46.7	47.3
161 ChrO	58.0	53.8	56.4	52.7	55.3	54.7	50.7	51.0	50.3	52.0	51.3	51.2
163 SimO	55.5	66.5	56.1	63.9	61.3	64.4	59.8	60.3	57.5	60.5	54.6	59.1
191 WOW	48.7	52.2	46.5	51.0	49.6	51.9	47.5	47.5	48.1	50.2	49.9	50.4
199 WOWs	44.9	43.5	43.2	44.9	44.2	45.2	38.4	39.3	43.6	41.9	44.9	44.0
207 SOW	56.7	68.8	60.7	58.9	58.9	63.5	47.6	47.9	55.1	60.2	52.0	63.4
220 AW	42.3	41.8	43.0	40.3	41.0	35.6	45.2	43.9	37.7	46.3	40.1	35.2
223 Hum	51.2	55.6	52.3	55.4	58.1	57.1	58.6	59.5	62.0	54.9	58.6	55.4

177 Simulated effect of a weak dose of an opiate on the street; 178 Simulated effect of a strong dose of an opiate on the street; 179 Simulated effect of a weak dose of an opiate on the research ward; 180 Simulated effect of a strong dose of an opiate on the research ward; 181 Simulated effect of a weak dose of an opiate during chronic administration; 182 Simulated effect of a strong dose of an opiate during chronic administration; 183 Simulated effect of reefers; 183 + 209; 184 Simulated effect of cocaine; 185 Simulated effect of goofballs; 186 Simulated effect of pep pills; 187 Simulated effect of LSD.

APPENDIX TABLE 3 (CONTINUED)
CORRECTED T-SCORES

CONDITION NO.	189	192	192+ 195	195	196	196+ 222	197	198	199	200	201	202
N	7	9	16	7	54	103	30	47	23	24	20	23
Scale No.	Sim Cpz	Sim Milt	Ave 192 + 195	Sim Dor	Sim Alc	Ave 192+ 196	Sim Alc Day After	Sim Op Day After	Sim PP Day After	Sim Reef Day After	Sim Coc Day After	Sim GB Day After
101 Re	43.9	45.8	44.5	42.8	46.7	46.7	44.3	45.5	46.4	48.0	46.9	46.9
2 GDP	42.6	46.7	45.7	44.4	45.5	46.5	44.8	46.3	46.1	50.2	46.8	46.6
102 Pyp	61.1	63.7	63.6	63.3	63.3	62.8	66.2	66.7	64.0	67.7	66.1	66.2
10 MBG	48.3	49.0	49.3	49.6	49.4	49.1	46.1	47.3	46.4	48.6	47.4	47.4
108 SoW	56.8	56.2	58.4	61.1	57.9	59.1	55.9	57.0	57.8	59.4	55.0	55.5
111 Con	39.3	42.6	41.2	39.4	35.2	34.8	42.2	43.5	42.7	42.1	43.9	45.5
127 Mal	44.1	46.3	42.5	37.5	37.3	40.0	45.2	46.8	43.0	47.7	48.2	48.2
125 GDE	70.0	62.6	68.7	76.5	70.8	70.0	64.3	59.7	60.3	60.7	58.2	63.8
123 Tir	54.2	58.6	59.1	59.7	51.4	52.3	52.1	47.9	44.1	51.1	45.2	53.2
29 Imp	42.3	46.0	44.0	41.3	49.3	48.9	42.9	45.4	44.7	50.0	44.4	43.7
143 Int	45.3	46.1	43.1	39.3	43.3	42.7	47.1	45.8	43.3	48.6	45.4	46.8
115 Taste	58.6	56.7	61.2	66.8	53.8	53.6	58.1	54.2	56.9	57.3	52.7	59.1
4 PCAG	50.7	54.5	55.8	57.3	51.0	51.6	50.4	47.7	45.3	48.9	47.0	50.4
7 AG	43.6	50.2	52.3	54.9	62.9	62.2	52.3	49.2	49.7	53.2	49.1	51.5
11 MG	42.6	43.1	41.9	40.4	40.3	40.6	42.4	44.3	41.3	48.2	44.3	44.4
12 BG	41.6	42.2	40.5	38.3	45.0	44.3	48.8	48.2	49.0	46.8	49.8	47.0
17 CS	50.3	53.3	52.3	51.0	41.2	41.8	49.5	48.7	47.1	49.8	48.3	48.9
19 Ex	52.6	44.3	45.3	46.5	56.4	54.2	46.6	51.1	53.9	51.0	54.0	48.7
21 LSD	47.0	41.9	41.2	40.2	48.6	47.9	49.8	52.2	54.3	51.3	55.3	50.4
47 IT	48.6	47.3	47.4	47.7	50.3	50.6	48.2	47.7	47.4	49.5	48.1	49.8
48 IF	51.9	50.1	53.1	57.0	54.1	54.6	49.8	51.1	50.8	48.9	50.8	52.2
52 Mar	59.1	53.4	56.9	61.4	51.1	50.5	52.3	52.4	53.2	56.4	54.9	58.1
55 AWS	42.6	45.3	43.6	41.4	45.3	45.5	44.2	45.5	45.2	48.0	46.7	46.4
87 Ef	48.8	48.4	46.7	44.6	50.6	51.8	43.3	47.1	46.2	45.3	52.5	45.7
106 Pop	41.1	44.2	42.7	40.7	46.1	45.6	45.7	44.4	43.5	44.7	44.1	45.9
112 Cr	36.9	40.0	36.7	32.4	41.5	41.9	42.4	41.5	41.3	44.5	41.7	40.4
122 Weak	50.4	51.5	53.4	55.9	47.7	46.0	45.7	48.4	46.9	48.5	48.1	46.0
129 Dr	57.1	62.0	66.1	71.2	77.5	75.9	61.2	53.7	52.3	54.8	51.0	59.2
136 Com	40.4	37.9	36.1	33.8	39.0	38.1	43.7	42.3	42.8	40.3	40.3	41.2
145 Proj	49.9	50.0	51.3	53.0	49.9	51.2	51.1	52.4	50.1	56.2	51.6	52.2
153 NAnt	47.8	51.0	50.9	50.7	48.6	48.4	47.7	47.5	46.4	50.2	47.8	48.4
161 ChrO	50.2	47.3	52.7	59.5	51.5	52.0	48.8	51.2	51.0	51.1	52.2	50.2
163 SimO	60.8	58.4	61.8	66.2	57.0	56.2	49.2	50.2	49.2	51.0	49.5	51.3
191 WOW	51.2	49.7	49.8	49.8	47.1	46.5	45.7	49.3	48.5	49.0	48.6	49.1
199 WOWs	47.4	46.2	43.9	41.0	41.3	41.8	44.0	47.1	45.5	44.8	47.9	46.0
20/ SOW	59.5	58.3	61.3	65.0	53.8	57.5	68.2	55.3	61.5	47.9	58.3	64.7
220 AW	37.6	45.[illegible]	42.4	38.9	44.3	44.5	43.7	41.8	42.7	48.8	44.9	46.4
223 Hum	54.5	53.2	56.0	59.4	61.8	60.5	55.6	54.5	54.2	50.4	53.7	53.4

189 Simulated effect of chlorpromazine; 192 Simulated effect of Miltown; 192+195; 195 Simulated effect of Doriden; 196 Simulated effect of alcohol; 196+222; 197 Simulated effect of morning after the use of alcohol; 198 Simulated effect of the morning after using opiates; 199 Simulated effect of the morning after using pep pills;200 Simulated effect of the morning after using reefers; 201 Simulated effect of the morning after using cocaine; 202 Simulated effect of the morning after using goofballs.

APPENDIX TABLE 3 (CONTINUED)

CORRECTED T-SCORES

CONDITION NO.	203	203 + 204	204	205	205 + 248	206	207	208	209	212	213	214
N	12	27	15	32	54	14	49	49	49	11	28	30
Scale No.	Sim Alc Kick	Ave 203 + 204	Sim GB Kick	Sim Op Kick	Ave 205+ 248	Sim PP Kick	Sim Other Ad No Drug	Sim Other Op Ad	Sim Other Reef	Sim Disas	Sim Death	Sim Get Up
101 Re	47.1	45.3	43.9	41.7	42.8	45.1	47.8	43.9	46.5	49.5	48.6	46.3
2 GDP	46.0	44.5	43.3	41.3	42.4	43.8	48.0	44.6	44.6	46.7	47.8	46.8
102 Pyp	61.3	64.1	66.2	63.1	62.9	64.6	66.8	66.3	60.9	58.8	63.5	65.4
10 MBG	40.7	41.8	42.6	39.8	40.1	43.0	47.3	51.8	53.0	43.2	46.7	47.7
108 SoW	57.1	59.3	61.0	55.3	55.6	56.5	56.7	59.0	57.0	52.4	55.4	55.1
111 Con	41.1	42.5	43.6	42.2	42.0	44.5	47.7	40.3	42.5	48.6	46.5	46.3
127 Mal	42.2	40.6	39.3	48.2	49.2	45.3	44.5	45.2	36.2	47.4	51.5	48.9
125 GDE	64.2	64.5	64.8	58.6	57.4	61.3	53.5	66.1	66.2	56.2	55.4	56.9
123 Tir	46.4	46.7	46.9	44.3	42.7	44.3	46.0	52.2	48.5	36.7	45.3	51.5
29 Imp	42.5	42.6	42.7	41.0	41.9	43.7	44.9	44.9	46.2	41.6	44.1	44.7
143 Int	44.3	43.6	43.0	45.2	45.0	43.7	45.9	44.1	44.0	46.5	47.6	47.4
115 Taste	56.9	58.5	59.8	51.7	51.0	60.6	50.9	56.4	59.6	50.9	49.9	55.3
4 PCAG	48.3	48.3	48.2	44.5	43.3	46.2	47.1	49.4	47.1	39.3	46.1	48.8
7 AG	56.8	54.0	51.9	45.3	45.3	51.9	54.2	48.1	52.4	46.6	48.6	49.5
11 MG	38.6	38.6	38.7	38.5	39.6	41.8	44.4	45.5	45.2	45.4	47.8	45.9
12 G	49.0	49.6	50.1	50.9	50.0	50.3	50.3	46.5	47.2	50.7	47.9	48.6
17 CS	47.4	47.9	48.2	50.4	48.7	47.3	50.9	48.5	44.9	41.0	47.5	52.9
19 Ex	49.0	49.6	50.1	48.9	49.2	50.5	52.1	53.1	59.5	54.2	50.3	48.3
21 LSD	49.6	51.3	52.6	51.6	53.6	54.6	53.7	46.4	49.5	57.8	51.9	50.7
47 IT	53.4	51.1	49.2	44.1	44.5	48.6	48.2	48.3	48.7	48.7	47.3	48.4
48 IF	57.0	56.6	56.4	52.8	52.8	53.5	52.2	51.5	51.4	48.5	48.2	48.7
52 Mar	58.9	55.5	52.8	50.8	52.1	51.8	52.6	50.9	54.5	53.2	51.8	52.2
55 AWS	46.2	44.4	42.9	41.2	42.2	43.8	46.9	42.6	44.9	48.9	49.4	46.2
87 Ef	47.3	45.7	44.4	48.8	48.1	45.6	48.8	55.4	55.8	47.7	45.0	46.6
106 Pop	41.5	43.1	44.4	42.2	42.4	42.3	46.2	44.4	47.3	42.3	46.5	45.8
112 Cr	39.9	38.9	38.2	35.9	37.0	38.9	40.0	36.2	39.2	46.3	46.6	43.7
122 Weak	43.8	45.0	45.9	49.0	47.6	46.2	52.2	51.8	52.2	41.3	47.3	48.2
129 Dr	57.0	57.6	58.1	48.9	48.7	54.7	50.2	60.4	64.7	53.2	51.8	50.5
136 Com	44.0	42.3	40.9	41.5	41.3	44.2	40.7	37.1	39.4	49.9	45.3	44.0
145 Proj	51.5	52.4	53.0	50.4	49.6	49.8	50.8	50.9	50.7	51.4	50.3	51.1
153 NAnt	46.6	45.6	44.8	44.4	44.7	45.4	48.3	45.9	48.5	49.0	52.4	48.0
161 ChrO	50.5	51.7	52.7	50.2	50.4	50.1	52.5	55.5	51.4	46.4	45.7	49.9
163 SimO	47.2	48.0	48.6	45.6	45.4	46.8	47.3	61.5	60.9	46.0	48.2	49.7
191 WOW	47.2	48.3	49.2	45.6	45.8	47.9	48.4	49.6	47.4	46.9	49.6	49.0
199 WOWs	49.8	50.3	50.6	53.2	53.1	50.1	47.2	46.6	40.2	50.3	50.2	48.0
207 SOW	82.5	80.2	78.3	82.1	81.6	76.4	51.7	58.0	48.1	66.4	57.4	51.3
220 AW	43.5	41.2	39.4	35.2	36.5	41.2	44.6	37.7	42.5	45.3	50.3	43.6
223 Hum	54.8	55.0	55.2	56.1	54.8	55.6	52.2	56.6	60.5	50.6	46.7	53.4

203 Simulated effect of kicking an alcohol habit; 203 + 204; 204 Simulated effect of kicking a goofball habit; 205 Simulated effect of kicking an opiate habit; 205 + 248; 206 Simulated effect of come down after using pep pills continuously for 30 days; 207 Answer questions as the average addict under no-drug would answer them; 208 Answer questions as the average addict would when he is taking an opiate; 209 Answer questions as the average reefer user would when he is using reefers; 212 Simulated effect of experience felt during a disaster; 213 Simulated effect of experience felt during the death of a member of the family; 214 Simulated effect of experience felt upon getting up in the morning.

APPENDIX TABLE 3 (CONTINUED)
CORRECTED T-SCORES

CONDITION NO.	215	216	222	223	224	226	227	228	244	247	248	254
N	31	28	49	18	16	22	16	19	29	21	22	6
Scale No.	Sim Party	Sim Flu	Sim Other Alco Alc	Sim Sex	Sim Date	Sim Misc Drugs	Sim Reef Kick	Sim Coc Kick	Sim Op	Sim Expec	Sim Loss Op	Pentaz 1-½ Weeks
101 Re	47.5	41.7	46.7	45.8	46.7	48.3	48.3	45.0	44.5	47.3	44.3	42.1
2 GDP	46.7	40.6	47.7	41.8	43.1	47.1	49.8	42.5	45.0	47.6	44.0	38.0
102 Pyp	60.9	61.8	62.2	55.6	62.6	57.8	66.5	68.6	64.3	65.4	62.6	69.2
10 MBG	48.6	41.7	48.7	49.3	50.4	47.2	46.7	42.1	51.8	45.5	40.5	47.7
108 SoW	56.6	57.3	60.2	53.0	55.5	53.2	57.2	57.5	56.2	56.8	56.2	61.8
111 Con	37.7	40.3	34.4	33.4	40.3	46.5	44.3	42.9	43.1	40.0	41.7	41.7
127 Mal	44.7	50.4	42.9	41.7	42.9	46.1	46.0	43.8	49.0	49.1	50.8	50.7
125 GDE	61.8	63.4	69.1	64.5	60.3	56.5	56.7	59.7	66.5	57.3	55.7	76.3
123 Tir	45,8	50.3	53.3	44.5	42.1	42.8	47.2	41.6	51.4	37.0	40.2	60.2
29 Imp	45.8	42.2	48.5	44.2	41.5	46.3	46.8	40.1	45.5	44.9	43.2	39.8
143 Int	43.8	45.7	42.1	41.3	47.6	47.9	44.4	43.9	43.8	43.9	44.9	42.5
115 Taste	50.6	59.3	53.4	50.7	49.4	48.2	52.3	55.7	59.1	50.1	50.0	70.4
4 PCAG	45.8	47.3	52.2	43.4	43.7	44.5	46.3	43.5	49.6	40.9	41.6	55.3
7 AG	54.0	43.4	61.5	47.1	51.5	48.6	51.4	47.5	47.4	50.9	45.3	45.5
11 MG	42.8	38.4	40.8	40.2	42.4	44.3	44.6	40.5	45.8	43.6	41.2	36.7
12 BG	44.8	49.6	43.7	43.7	47.2	49.1	48.5	50.5	46.2	46.4	48.6	45.7
17 CS	42.9	50.6	42.5	44.2	42.5	44.4	46.7	47.5	49.6	44.4	46.1	54.8
19 Ex	55.7	46.6	51.9	59.9	58.5	56.7	51.7	57.8	52.0	55.4	49.5	51.8
21 LSD	51.8	47.1	47.3	56.0	55.0	57.2	56.0	56.9	46.9	59.5	56.6	44.1
47 IT	47.9	45.9	50.9	48.9	47.3	48.1	49.0	47.8	49.2	47.0	45.0	49.9
48 IF	50.8	49.6	55.2	54.7	48.0	49.6	51.9	48.4	50.7	49.6	52.8	54.3
52 Mar	53.9	53.7	49.9	51.6	55.0	48.9	53.1	57.7	50.9	52.2	55.9	58.6
55 AWS	47.3	42.1	45.6	44.2	45.3	47.4	48.2	43.7	43.8	46.6	43.8	40.7
87 Ef	53.9	46.5	53.1	61.0	56.0	51.5	45.0	50.6	53.6	48.1	47.1	47.8
106 Pop	46.2	42.8	45.0	44.0	47.1	45.2	45.7	40.5	44.1	43.0	42.7	41.8
112 Cr	42.4	38.9	42.3	39.9	41.1	44.4	42.5	39.2	41.1	43.3	38.7	31.5
122 Weak	50.1	49.7	44.1	49.9	47.8	48.0	48.5	47.0	48.1	46.1	45.4	55.1
129 Dr	61.2	54.0	74.1	56.4	53.4	52.4	51.9	49.0	60.7	47.8	48.2	61.7
136 Com	39.1	41.8	37.1	37.3	40.9	46.2	41.8	42.7	41.7	41.7	41.0	35.5
145 Proj	51.9	50.9	52.7	49.8	49.3	49.6	53.3	51.4	50.3	50.2	48.4	53.2
153 NAnt	48.7	46.6	48.2	50.3	46.7	48.7	49.7	44.1	46.7	47.5	45.0	47.9
161 ChrO	49.1	48.6	52.5	50.3	47.8	47.8	48.1	49.1	52.2	52.3	50.8	54.1
163 SimO	52.2	47.5	55.3	55.0	51.2	49.9	49.4	48.7	60.0	46.7	45.0	58.7
191 WOW	46.5	46.4	46.0	44.0	45.9	48.9	49.3	47.7	49.1	48.6	46.1	45.5
199 WOWs	44.6	51.9	42.4	43.2	44.0	49.4	46.4	50.9	44.1	46.6	53.1	48.2
207 SOW	45.4	80.0	61.6	52.3	44.8	51.7	50.8	71.4	58.2	54.6	80.8	64.9
220 AW	46.6	37.9	44.8	43.5	42.3	43.2	45.7	37.8	41.0	43.2	38.5	37.9
223 Hum	58.8	55.0	59.1	54.2	58.3	52.3	51.0	56.0	55.3	51.6	53.0	60.4

215 Simulated effect of experience felt during a party; 216 Simulated effect of the flu; 222
Answer questions as the average alcoholic would answer them when he has been drinking alcohol;
223 Simulated effect of experience felt during sexual intercourse; 224 Simulated effect of exper-
ience felt on a date with a woman; 227 Simulated effect of come-off effect of using reefers for at
least 30 days; 228 Simulated effect of come-off effect of using cocaine for at least 30 days in
succession; 244 Simulated effect of opiate withdrawal; 247 Simulated effect of expecting a first
shot of an opiate after having been off of opiates for a long time; 248 Simulated effect of not
getting one's usual supply of opiates; 254 Pentazocine-chronic 1 and ½ weeks; 226 Simulated miscel-
laneous nondrug conditions.

APPENDIX TABLE 3 (CONTINUED)
CORRECTED T-SCORES

CONDITION NO.	255	301	302	303	304	305	306	307	308	309	310	311
N	6	22	22	22	22	22	22	22	22	22	22	19
Scale No.	MS 60 mg Early Phase	Sim Ideal Self	Sim Other Mother	Sim Other Father	Sim Bef Use Drugs	Sim No Drug	Sim Op	Sim Other MI	Sim Other Alco No Drug	Sim Other Ave Man	Sim Other Crim	Sim Dep
101 Re	45.3	46.5	49.3	48.8	48.3	47.5	42.5	51.3	48.4	49.4	48.1	47.4
2 GDP	46.4	43.9	49.7	47.8	47.4	45.1	42.2	56.3	49.3	48.6	52.7	49.5
102 Pyp	66.4	57.0	44.4	48.7	61.6	61.1	61.8	45.0	62.1	57.1	69.3	65.8
10 MBG	46.7	50.4	51.8	51.1	50.7	51.5	49.6	43.6	48.5	50.7	46.5	46.0
108 SoW	56.7	57.9	57.3	57.5	58.0	56.4	64.3	75.2	54.9	56.7	70.3	58.4
111 Con	47.7	52.0	45.4	46.8	51.0	52.3	38.7	42.9	45.1	47.2	43.0	43.8
127 Mal	55.4	49.9	56.7	54.8	48.3	50.2	48.6	37.8	50.2	50.2	47.6	49.4
125 GDE	58.5	53.3	52.1	54.0	55.2	55.8	69.9	59.5	55.2	54.1	56.0	55.4
123 Tir	49.4	46.3	51.1	47.8	46.7	48.0	51.0	43.5	46.6	48.8	42.9	46.7
29 Imp	38.6	41.5	47.4	46.2	45.6	43.4	41.5	45.0	47.8	49.3	49.2	43.7
143 Int	44.0	48.3	54.5	49.2	47.3	46.5	41.8	42.4	43.9	50.0	44.6	46.0
115 Taste	52.1	48.7	49.1	49.1	52.3	51.5	59.6	51.9	49.8	49.3	48.4	44.7
4 PCAG	49.3	46.8	50.8	48.1	48.4	48.0	48.2	46.5	48.9	48.7	46.3	47.1
7 AG	48.8	49.8	49.2	48.9	51.1	53.3	47.8	59.2	52.4	49.9	56.0	43.1
11 MG	46.1	40.7	48.2	45.5	44.3	43.8	42.1	40.9	45.3	47.1	40.6	46.0
12 BG	48.8	51.2	48.5	46.8	49.5	49.9	45.1	47.1	49.7	48.5	49.9	47.4
17 CS	55.3	50.3	49.5	48.1	47.9	48.4	48.4	44.1	48.8	47.5	47.1	49.5
19 Ex	49.2	51.0	48.6	49.0	53.0	51.7	51.8	55.2	49.0	51.6	50.8	45.5
21 LSD	51.2	49.5	48.7	52.3	51.0	50.8	48.5	55.8	50.8	50.6	52.3	50.4
47 IT	47.4	48.4	51.4	49.5	49.3	49.2	47.1	59.0	49.6	50.1	49.2	46.8
48 IF	49.2	49.0	47.7	50.3	50.9	52.1	58.4	68.4	53.5	49.0	58.7	53.7
52 Mar	53.6	52.7	48.8	53.4	55.3	54.1	54.6	56.7	48.9	51.3	54.4	45.1
55 AWS	45.3	46.0	50.0	49.1	47.9	46.7	41.9	49.8	48.8	49.3	47.8	48.4
87 Ef	46.0	54.7	51.1	50.1	49.3	52.0	55.7	50.5	52.1	49.8	48.2	40.5
106 Pop	44.0	48.5	51.0	51.5	49.3	48.4	41.7	41.0	46.6	50.5	44.9	45.2
112 Cr	41.5	41.0	50.7	46.7	42.6	41.4	34.6	44.6	41.6	48.5	37.4	44.5
122 Weak	51.8	51.4	50.1	52.5	50.9	52.8	49.2	40.6	49.0	51.9	51.4	46.1
129 Dr	48.0	50.7	49.4	54.1	52.6	52.3	62.2	60.8	52.3	53.7	52.4	51.4
136 Com	41.1	41.1	45.2	46.5	42.9	41.8	33.3	35.8	39.0	45.1	32.1	41.3
145 Proj	52.1	52.4	57.3	53.2	55.0	52.9	53.5	67.3	49.5	54.5	62.0	54.3
153 NAnt	49.0	48.1	50.4	50.9	49.4	48.7	45.7	49.7	48.2	49.8	49.9	50.9
161 ChrO	57.4	49.9	52.6	49.9	49.5	49.4	54.1	54.2	49.2	49.3	55.4	48.7
163 SimO	48.5	48.9	49.3	48.5	50.2	49.1	62.0	51.2	47.0	49.6	47.3	48.0
191 WOW	49.7	45.8	49.7	48.6	47.1	47.2	47.2	52.3	45.5	47.2	48.5	46.0
199 WOWs	49.9	46.3	48.5	48.4	44.9	45.1	46.5	48.5	46.8	44.5	44.4	47.5
207 SOW	52.6	40.6	47.1	44.9	39.4	39.5	60.3	71.5	53.4	41.5	44.0	62.6
220 AW	43.2	45.3	52.8	49.8	48.0	46.3	38.6	52.8	49.7	53.1	47.6	51.2
223 Hum	53.6	52.0	47.7	48.7	50.5	52.1	55.5	45.6	49.6	50.3	46.0	47.1

255 Early chronic phase of being on 60 mg of morphine; 301 Answer questions as you would as your ideal self; 302 Answer questions as your mother would answer them; 303 Answer questions as your father would answer them; 304 Answer questions as you would have prior to using drugs; 305 Simulated effect of no-drug experience on the street (control for 301-310); 306 Simulated effect of opiate; 307 Answer questions as a mentally ill person would answer them; 308 Answer questions as an average alcoholic would when he is not using alcohol; 309 Answer questions as the average man on the street would answer them; 310 Answer questions as the average criminal would answer them; 311 Answer questions as you would when feeling depressed.

APPENDIX TABLE 3 (CONTINUED)
CORRECTED T-SCORES

CONDITION NO.	312	313	314	315	316	317	318	319	320	321	322
N	19	19	19	19	19	19	19	19	19	19	19
Scale No.	Sim Exc	Sim Pleas	Sim Nerv	Sim Tir	Sim Anger	Sim Dang	Sim To Do Dang	Sim No Drug	Sim Op	Sim Bored	Sim Afraid
101 Re	46.0	46.3	49.0	44.7	49.5	48.6	47.5	47.5	43.3	48.0	51.5
2 GDP	44.0	45.7	48.6	45.6	49.3	48.3	48.8	47.4	43.8	48.7	50.2
102 Pyp	61.2	59.5	64.2	62.1	66.9	64.9	62.9	61.5	62.6	65.8	62.3
10 MBG	44.5	51.9	44.7	47.8	43.8	45.3	45.2	51.2	50.4	46.6	43.8
108 SoW	56.6	55.2	57.0	58.2	64.7	55.2	58.0	54.8	58.9	61.1	55.0
111 Con	35.1	47.5	36.9	41.5	36.9	43.1	41.6	51.1	39.5	44.4	40.5
127 Mal	42.9	45.0	47.8	49.4	47.2	46.5	44.5	45.8	47.3	48.7	49.2
125 GDE	61.8	58.3	59.8	60.5	58.9	59.1	58.4	55.8	67.7	54.2	56.7
123 Tir	31.0	47.3	36.6	55.2	31.7	32 4	32.2	48.5	51.5	48.6	31.9
29 Imp	45.6	42.5	45.5	44.8	45.3	46.0	43.9	41.6	44.2	45.8	44.2
143 Int	44.2	47.1	46.2	47.1	43.7	46.4	46.6	47.9	44.3	45.6	44.8
115 Taste	47.1	51.8	45.6	48.1	49.0	52.8	53.4	52.2	58.1	46.5	46.8
4 PCAG	36.3	45.1	41.8	52.8	40.2	36.4	36.0	45.3	47.2	48.7	41.1
7 AG	46.7	49.6	46.8	44.5	52.6	48.5	44.2	51.2	46.5	50.1	48.3
11 MG	39.2	42.7	43.1	44.2	43.0	44.4	45.1	45.0	44.8	44.8	46.4
12 BG	48.4	50.2	46.6	45.4	47.8	51.4	50.4	50.2	44.6	46.4	46.6
17 CS	37.0	45.1	41.8	55.2	40.5	40.8	41.2	48.8	46.1	50.8	41.8
19 Ex	61.2	54.8	54.6	43.0	58.4	61.9	58.9	52.2	52.1	46.6	57.4
21 LSD	64.7	50.8	61.9	41.7	64.2	65.5	63.0	51.7	48.0	52.3	63.3
47 IT	47.1	48.0	47.9	46.8	48.6	45.9	47.0	49.0	46.3	47.1	48.7
48 IF	53.3	59.9	53.5	50.8	59.3	49.9	51.3	49.7	52.7	52.2	55.7
52 Mar	46.8	52.0	42.7	49.3	52.4	52.6	54.7	54.8	53.5	46.9	46.1
55 AWS	45.3	45.3	48.5	44.9	48.0	47.5	47.4	46.1	42.1	48.0	50.6
87 Ef	48.1	54.5	43.0	42.4	43.6	46.0	44.0	49.5	53.7	40.7	43.9
106 Pop	42.6	47.7	44.4	43.8	42.9	42.7	41.3	46.1	43.0	45.5	42.3
112 Cr	44.9	41.5	45.7	42.9	41.6	42.0	43.8	42.5	39.7	43.0	46.2
122 Weak	38.7	52.0	40.8	50.8	39.0	42.0	39.5	49.5	48.1	49.2	40.9
129 Dr	61.7	56.5	54.6	56.4	53.7	50.0	47.4	51.7	60.8	52.4	50.5
136 Com	44.9	43.9	42.3	38.0	33.8	43.9	44.4	44.9	39.2	37.0	43.1
145 Proj	49.0	51.5	51.5	54.4	58.1	51.8	52.9	52.3	51.7	55.5	50.3
153 NAnt	47.5	46.2	50.5	52.6	50.3	49.8	49.3	48.1	45.8	51.4	50.0
161 ChrO	48.0	48.5	49.3	47.9	54.0	51.4	51.7	49.2	54.3	49.8	48.4
163 SimO	47.8	52.9	45.8	50.2	46.0	47.9	46.6	48.9	60.1	48.2	46.7
191 WOW	43.4	45.3	44.4	45.9	45.5	46.3	46.9	46.6	47.3	47.4	48.0
199 WOWe	41.3	42.4	45.8	45.1	48.1	46.3	48.7	44.3	44.4	47.1	49.2
207 SOW	56.6	39.1	63.3	60.3	59.5	54.6	54.3	40.4	59.1	56.4	63.6
220 AW	42.0	44.5	49.1	43.2	48.0	44.3	44.7	46.9	39.4	50.2	49.6
223 Hum	58.3	58.5	49.8	53.2	44.4	47.4	47.2	52.3	56.6	47.9	47.3

312 Answer questions as you would when feeling excited; 313 Answer questions as you would when feeling pleasant; 314 Answer questions as you would when feeling nervous; 315 Answer questions as you would when feeling tired; 316 Answer questions as you would when feeling angry; 317 Answer questions as you would when you are doing something dangerous; 318 Answer questions as you would when you are about to do something that is dangerous; 319 Answer questions as you would on the street under no-drug; 320 Simulated effect of an opiate; 321 Answer questions as you would when feeling bored; 322 Answer questions as you would when feeling afraid.

APPENDIX TABLE 3 (CONTINUED)
CORRECTED T-SCORES

CONDITION NO.	510	511	512	513	515	516	517	518	519
N	5	5	5	5	4	5	5	4	4
Scale No.	No Drug	Meth 10 mg Week 1	Meth 60 mg Week 4	Meth 100 mg Week 10	Meth Week 4 Kick	Meth Week 8 Post	Meth Week 12 Post	Meth Week 16 Post	Meth Week 20 Post
101 Re	46.4	43.8	45.2	43.6	42.7	48.0	46.5	41.9	43.3
2 GDP	50.6	45.4	47.4	49.4	40.9	47.3	47.3	46.8	45.8
102 Pyp	64.6	60.2	62.0	60.8	67.8	62.6	64.3	[illegible]	64.3
10 MBG	48.1	48.6	49.9	50.2	44.1	47.0	45.8	40.3	45.6
108 SoW	56.6	57.2	56.6	54.7	55.6	58.3	59.7	66.8	64.8
111 Con	45.3	43.7	45.9	46.1	46.0	49.5	49.4	44.9	46.9
127 Mal	46.1	42.3	47.7	44.6	49.9	42.7	43.1	42.7	41.3
125 CDE	53.3	63.2	60.3	57.4	59.5	53.4	53.9	55.3	58.5
123 Tir	45.9	52.8	59.9	53.1	49.7	41.5	47.8	43.8	48.4
29 Imp	44.5	42.0	45.3	43.4	43.6	46.9	44.1	44.8	41.9
143 Int	49.5	53.8	52.7	50.9	47.8	50.1	49.0	45.9	51.2
115 Taste	46.0	58.2	56.8	52.8	52.0	49.6	48.6	44.6	50.3
4 PCAG	46.2	48.6	51.8	49.2	46.8	45.8	47.3	45.9	45.8
7 AG	54.6	43.6	45.3	45.7	51.2	56.0	53.3	58.0	52.2
11 MG	43.0	40.5	42.4	42.8	40.5	39.1	38.1	32.8	34.0
12 BG	52.7	51.9	51.2	53.8	51.5	54.5	51.6	49.5	52.4
17 CS	45.8	47.5	57.7	54.7	52.5	47.5	51.4	49.6	47.8
19 Ex	49.4	48.4	45.3	50.2	45.4	54.1	45.7	47.8	46.4
21 LSD	52.0	47.5	45.8	46.7	49.1	57.3	52.2	52.4	50.5
47 IT	45.5	46.8	47.1	47.7	45.8	46.7	47.8	45.7	46.9
48 IF	50.0	44.4	46.0	47.3	48.4	45.9	46.6	54.6	48.4
52 Mar	43.6	50.3	48.6	47.4	49.9	47.0	50.4	48.3	43.5
55 AWS	45.5	43.8	45.7	43.0	41.0	46.4	46.8	40.7	42.3
87 Ef	54.1	51.4	51.3	49.0	43.1	49.1	48.0	48.2	48.7
106 Pop	44.7	36.1	38.0	39.1	39.6	39.4	38.2	39.4	39.6
112 Cr	44.1	42.4	40.5	41.7	35.3	40.4	42.5	36.4	36.5
112 Weak	48.3	46.5	50.8	49.4	51.3	49.9	50.3	52.2	48.7
129 Dr	48.2	53.1	51.9	48.5	50.7	46.1	44.1	45.6	44.7
136 Con	40.4	40.4	41.3	40.9	36.9	38.8	37.2	30.1	32.6
145 Proj	55.7	56.3	57.5	59.7	52.3	56.3	57.9	66.7	64.7
153 NAnt	47.6	50.5	49.0	46.8	46.2	50.6	49.9	46.9	48.5
161 ChrO	51.8	57.6	65.4	62.0	45.3	53.2	47.0	52.9	51.4
163 SimO	43.8	51.1	52.7	51.8	43.3	44.4	45.2	43.7	44.8
191 WOW	46.5	44.8	54.3	50.2	46.0	47.5	46.2	43.2	44.8
199 WOWs	49.1	42.8	56.7	55.5	49.5	50.3	47.8	40.2	45.0
207 SOW	44.1	47.3	53.5	52.6	78.7	44.6	46.8	50.1	47.2
220 AW	46.6	42.5	44.9	40.2	42.7	48.9	47.8	44.1	44.3
223 Hum	53.3	51.5	51.6	54.5	54.7	51.6	53.3	[illegible]	57.7

510 No-drug control for methadone study; 511 Methadone - 10 mg after 1 week of chronic administration; 512 Methadone - 60 mg level after four weeks of chronic administration; 513 Methadone - 100 mg level after 10 weeks of chronic administration; 515 Methadone - fourth week after complete stopping of drug administration; 516 Methadone - eighth week after complete stopping of drug administration; 517 Methadone - 12th week after complete stopping of drug administration; 518 Methadone - 16th week after complete stopping of drug administration; 519 Methadone - 20th week after complete stopping of drug administration.

APPENDIX TABLE 3 (CONTINUED)
CORRECTED T-SCORES

CONDITION NO.	901	902	902, 903, +904	903	904	19+31
N	27	30	93	31	32	31
Scale No.	Norm	Norm Seco 200 mg	Ave of 902, 903, +904	Norm Mepr 800 mg	Norm Seco 100 mg+ Mepr 400 mg	Pent 250 mg
101 Re	47.3	44.9	45.7	46.3	45.9	45.5
2 GDP	47.2	45.7	46.7	48.2	46.3	47.0
102 Pyp	38.8	40.4	40.7	40.0	41.7	66.1
10 MBG	48.3	50.5	50.6	50.2	50.9	51.0
108 SoW	55.2	55.1	54.7	54.2	54.8	57.5
111 Con	43.4	42.1	43.8	44.2	45.0	43.3
127 Mal	39.6	36.5	36.9	37.3	36.9	46.6
125 GDE	57.7	63.9	61.7	59.1	62.2	66.6
123 Tir	48.7	57.1	57.2	56.6	57.9	56.5
29 Imp	49.1	49.1	49.0	48.6	49.3	47.8
143 Int	47.9	48.4	49.4	50.7	49.0	49.7
115 Taste	50.4	51.0	51.3	52.0	51.0	58.7
4 PCAG	48.9	51.7	52.8	52.8	53.8	51.9
7 AG	49.1	51.0	49.1	48.1	48.4	51.6
11 MG	42.9	41.1	42.9	44.4	43.0	45.0
12 BG	46.0	45.2	45.7	46.2	45.6	48.4
17 CS	48.9	47.9	51.0	52.9	52.0	48.6
19 Ex	49.2	46.0	45.5	45.4	45.2	48.8
21 LSD	50.1	41.9	42.1	42.8	41.6	44.5
47 IT	47.2	46.8	47.6	48.0	47.9	44.7
48 IF	51.4	53.3	51.3	49.4	51.2	46.9
52 Mar	51.6	48.5	48.4	48.8	48.1	51.4
55 AWS	46.8	44.5	45.3	46.1	45.3	52.0
87 Ef	38.6	40.4	38.3	37.1	37.4	45.3
106 Pop	49.3	49.2	49.9	49.7	50.8	46.3
112 Cr	46.5	45.2	47.2	48.8	47.4	43.8
122 Weak	47.1	50.9	49.6	46.9	50.9	48.7
129 Dr	54.8	66.1	61.4	56.5	61.7	65.3
136 Com	46.0	43.9	45.7	47.5	45.5	41.6
145 Proj	53.8	52.5	52.8	53.1	52.9	53.8
153 NAnt	50.0	50.9	51.5	51.4	52.2	50.6
161 ChrO	51.9	47.2	47.8	48.4	48.0	48.1
163 SimO	48.8	51.7	51.5	51.0	51.8	55.0
191 WOW	49.6	49.7	50.2	50.5	50.5	48.3
199 WOWs	46.3	44.5	45.8	46.2	46.7	42.5
207 SOW	44.6	51.6	50.3	48.9	50.3	49.1
220 AW	45.7	45.1	45.8	46.3	46.0	47.0
223 Hum	53.1	56.8	54.6	51.7	55.3	53.4

901 Normal Ss, no-drug control for conditions 902, 903, and 904 by Sice; 902 Normal Ss, Secobarbital - 200 mg by Sice; 902 + 903 + 904 Normal Ss; 903 Normal Ss, meprobamate - 1600 mg by Sice; 904 Normal Ss, meprobamate - 800 mg plus secobarbital - 100 mg by Sice; 19 + 31 Pentobarbital - 250 mg.

APPENDIX TABLE 4

SUM OF t^2 FOR DRUGS AND SUM OF t^2 FOR CLINICAL GROUPS

Condition Nos.		00+91	00+150	14	15	16	17	18	19	19+31	20	21	22	22+24
N		342	257	31	30	18	18	18	17	47	147	15	28	57
Drug Conditions														
No-drug	00+91	0	2	3	7	46	47	34	42	50	64	59	33	42
MS	20	63	52	61	42	12	8	43	39	26	0	10	33	36
CYC+NAL	23+25	109	86	108	85	80	64	75	45	35	69	61	28	19
CPZ	40	31	21	35	20	52	52	22	29	27	62	61	23	30
LSD	51	93	84	103	97	109	94	143	141	107	79	67	83	81
Amph	60	42	35	41	29	23	18	52	50	37	13	15	33	38
Alc	81	89	71	85	71	74	60	70	67	28	55	55	37	35
Pent	31	66	49	63	43	36	28	31	29	4	28	30	15	15
Op W	154+168	79	89	89	89	123	137	121	124	141	140	171	128	139
Op Chr	151+152+153	49	52	57	50	96	100	81	87	100	114	121	84	97
Clinical Groups														
Addict	170+173	9	12	8	7	4	7	15	5	6	5	10	11	12
MI	26	56	60	56	50	44	52	55	47	45	47	46	46	46
Normal	28	100	106	106	90	79	98	109	92	89	93	92	98	96
ALC	86+87+88	94	98	90	95	58	79	105	83	84	60	72	89	88
Cr	94	64	68	59	61	42	52	71	50	56	47	64	54	55
Sim MI	307	118	117	132	109	138	129	121	113	101	125	119	102	101

00+91 No-drug; 01+150 Placebo; 14 No-drug; 15 Placebo; 16 Morphine-15 mg/70 Kg; 17 Morphine-30 mg/70 Kg; 18 Pentobarbital-125 mg/70 Kg; 19 Pentobarbital-250 mg/70 Kg; 19+31 Pentobarbital-250 mg; 20 Morphine-20 mg; 21 Morphine-10 mg; 22 Cyclazocine-.6mg/70 Kg; 22+24 Average of condition 22 and 24.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.		23	23+25	24	25	26	26+27	27	28	29	30	31	37
N		30	58	29	28	89	198	109	219	36	189	30	4
Drug Conditions													
No-drug	00+91	117	109	54	104	30	41	55	20	25	23	66	34
MS	20	76	69	42	64	62	74	88	74	75	30	28	24
CYC+NAL	23+25	2	0	13	2	127	139	152	135	150	47	30	96
CPZ	40	88	76	40	67	53	65	78	46	53	13	37	49
LSD	51	91	91	84	93	144	164	186	147	155	85	98	79
Amph	60	84	78	47	76	58	72	88	71	72	29	38	18
Alc	81	41	40	36	43	119	141	162	128	139	35	16	82
Pent	31	35	30	17	28	79	95	111	88	96	13	0	48
Op W	154+168	234	220	158	208	70	83	96	69	59	108	162	133
Op Chr	151+152+153	177	170	113	167	54	64	76	57	59	69	118	87
Clinical Groups													
Addict	170+173	22	20	14	19	39	56	74	74	72	9	8	8
MI	26	49	48	47	48	0	3	9	57	65	49	42	39
Normal	26	105	103	96	102	57	62	71	0	3	100	89	74
Alc	86+87+88	99	93	88	88	56	74	92	73	75	91	82	76
Cr	94	68	65	56	62	49	66	84	86	81	64	59	46
Sim MI	307	79	80	102	82	96	94	96	151	155	99	93	130

23 Cyclazocine - 1.2 mg/70 Kg; 23+25 Average of condition 23 and 25, 24 Nalorphine - 16 mg/70 Kg; 25 Nalorphine - 32 mg/70 Kg; 26 Mentally Ill, males; 26+27 Mentally Ill, conditions 26 and 27; 27 Mentally Ill, females; 28 Normal college students, males and females combined; 29 Normal college students; 30 Pentobarbital - 200 mg; 31 Pentobarbital - 250 mg; 37 Morphine - 20 mg.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.		39	40	42	43	45	45+46	46	47	48	50	51	60	61
N		4	173	4	13	19	38	19	5	5	49	172	209	30
Drug Conditions														
No-drug	00+91	44	31	34	57	59	73	94	46	61	46	93	42	18
MS	20	113	63	116	77	37	45	58	52	66	27	79	13	29
CYC+NAL	23+25	213	76	175	152	37	30	29	133	121	51	91	79	79
CPZ	40	67	0	51	89	26	34	48	54	54	57	126	55	37
LSD	51	171	126	151	161	105	114	129	116	117	22	0	52	51
Amph	60	87	55	87	76	41	51	66	46	195	16	53	0	9
Alc	81	165	69	134	148	54	53	58	108	98	42	89	58	59
Pent	31	132	37	111	106	23	25	32	78	74	36	98	38	43
Op W	154+168	39	101	53	70	140	163	191	95	76	111	167	122	100
Op Chr	151+152+153	37	56	51	77	101	111	127	40	30	98	167	87	69
Clinical Groups														
Addict	170+173	10	11	23	47	11	12	16	13	11	6	12	7	6
MI	26	41	57	44	4	46	56	67	54	49	42	51	47	46
Normal	28	88	103	93	58	96	105	116	86	89	89	95	95	89
Alc	86+87+88	99	93	119	64	96	103	113	75	82	75	74	71	76
Cr	94	47	66	63	42	51	60	70	72	63	53	63	58	55
Sim MI	307	96	105	91	100	78	83	90	104	80	88	98	117	111

39 Opiate withdrawal - 5th day of dose reduction; 40 Chlorpromazine - (Day 1, 25 mg qid; Day 2, 50 mg qid; Day 3, 75 mg); 42 Morphine - 19th day after dose reduction; 43 Schizophrenics; 45 Scopolamine - 5 mcg/Kg; 45+46 Average of 45 and 46; 46 Scopolamine - 7.5 mcg/Kg; 47 Heroin - 4th day on chronic administration; 48 Heroin - Day 21 on chronic administration; 50 LSD - 1 mcg/Kg; 51 LSD - 1.5 mcg/Kg; 60 Amphetamine, Benzedrine - 30 mg, 61 Amphetamine, Benzedrine, 15 mg.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.		70	71	80	81	82	83	85	86+ 87+ 88	89	90	91	94	108
N		44	177	75	90	31	66	49	148	15	18	22	171	11
Drug Conditions														
No-drug	00+91	16	33	55	89	97	47	93	49	15	21	7	51	25
MS	20	30	29	43	55	60	41	100	65	95	87	62	107	52
CYC+NAL	23+25	59	38	40	41	24	42	156	145	149	145	103	185	51
CPZ	40	17	21	44	69	60	45	119	83	44	41	35	101	21
LSD	51	71	61	81	89	109	67	177	144	148	135	111	180	96
Amph	60	18	21	42	58	70	32	111	70	81	79	46	102	46
Alc	81	43	30	5	0	8	10	171	129	135	129	99	176	59
Pent	31	25	16	11	16	11	14	130	96	99	94	67	136	35
Op W	154+168	100	132	151	188	199	154	91	62	77	62	94	54	130
Op Chr	151+152+153	61	80	108	144	145	101	126	85	55	57	56	85	71
Clinical Groups														
Addict	170+173	7	11	7	9	16	11	71	58	52	71	12	33	26
MI	26	45	50	45	45	51	51	75	56	48	59	52	49	65
Normal	28	96	98	90	90	95	95	88	73	14	4	102	86	109
Alc	86+87+88	83	91	79	82	100	86	16	0	95	93	102	46	124
Cr	94	54	69	58	67	75	73	49	46	84	93	73	0	91
Sim MI	307	102	96	102	94	89	107	212	231	119	134	106	173	98

70 Pyrahexyl - 60 mg; 71 Pyrahexyl - 90 mg; 80 Alcohol - 2.12 cc of 30% alcohol/Kg; 81 Alcohol - 3.0 cc of 30% alcohol/Kg; 82 Alcohol - 4.43 cc of 30% alcohol/Kg; 83 Alcohol - 1.1 cc of 30% alcohol/Kg; 85 Alcoholics - day 2 of withdrawal from alcohol; 86+87+88 Alcoholics - 1, 2 and 3 weeks after withdrawal of alcohol; 89 Normal college, male; 90 Normal college, female; 91 No-drug; 94 Criminals; 108 Cyclazocine - .3 mg/70Kg.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.		109	110-1	110- 2	115	116	117	118	123-1	123-2	131	132	133	150
N		12	42	37	6	6	6	6	51	73	42	42	42	15
Drug Conditions														
No-drug	00+91	60	6	4	13	22	17	43	51	34	77	69	86	22
MS	20	55	60	58	77	81	90	122	98	82	19	17	122	66
CYC+NAL	23+25	22	115	111	124	126	149	171	158	148	66	72	143	102
CPZ	40	31	35	30	48	43	52	63	71	54	62	59	102	38
LSD	51	79	101	100	126	154	137	178	125	140	96	101	90	134
Amph	60	50	39	38	60	70	65	113	82	72	28	28	96	60
Alc	81	32	98	92	120	109	121	166	136	122	65	66	135	89
Pent	31	20	71	65	85	81	98	123	116	94	37	37	132	61
Op W	154+168	157	74	67	99	88	72	51	29	39	137	117	70	111
Op Chr	151+152+153	98	47	40	51	39	24	69	68	54	92	81	92	74
Clinical Groups														
Addict	170+173	19	3	5	18	9	7	16	13	4	17	14	49	13
MI	26	57	45	45	76	61	56	67	46	39	48	49	86	55
Normal	28	111	85	88	136	111	110	114	74	76	111	112	145	99
Alc	86+87+88	104	80	88	121	95	79	74	56	48	102	94	119	102
Cr	94	79	47	52	86	60	53	54	34	27	75	68	95	72
Sim MI	307	100	120	112	136	127	130	134	109	121	70	79	66	120

109 Nalorphine - 8 mg/70 Kg; 110 No-drug, group 1; 110 No-drug, group 2; 115 No-drug; 116 Cyclazocine - chronic at 6 mg/70 Kg; 117 Cyclazocine - chronic stabilization at 6 mg/70 Kg; 118 Cyclazocine - Day 5 withdrawal; 123 General population addicts, withdrawal of opiates, group 1; 123 General population of addicts, no withdrawal of opiates, group 2; 123 Total general population of opiate addicts; 131 Opiate, simulation of the acute effect; 132 Opiate, simulation of the chronic effects of opiates; 133 Opiate, simulation of the withdrawal effects of opiates; 150 No-drug.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.		151+ 152+ 153	154	154+ 168	168	170	170+ 173	173	174	177	178	179	180	181	182
N		27	15	73	58	58	189	131	171	10	10	10	10	10	10
Drug Conditions															
No-drug	00+91	48	174	79	84	40	13	9	10	57	157	60	117	112	137
MS	20	114	274	141	136	81	66	66	56	32	59	38	28	37	71
CYC+NAL	23+25	170	329	220	222	156	128	123	125	77	67	36	66	70	77
CPZ	40	55	187	101	108	69	45	42	57	75	105	46	91	84	103
LSD	51	166	235	168	180	127	109	109	96	71	141	70	108	101	120
Amph	60	87	233	123	124	64	48	49	38	26	86	34	51	46	87
Alc	81	143	287	188	192	118	103	104	97	76	105	44	67	59	86
Pent	31	118	276	162	163	99	79	78	76	56	65	31	42	45	65
Op W	154+168	73	92	0	6	68	53	54	62	119	208	139	166	170	185
Op Chr	151+152+153	0	180	74	76	81	50	43	52	75	162	77	133	116	139
Clinical Groups															
Addict	170+173	12	34	16	16	2	0	1	1	17	32	32	17	31	43
MI	26	55	65	50	52	35	39	44	43	42	75	77	48	66	87
Normal	28	115	116	71	64	63	74	81	78	98	114	139	112	130	141
Alc	86+87+88	105	89	42	36	46	58	67	63	91	110	143	76	97	126
Cr	94	70	67	28	23	29	33	38	39	72	86	103	68	94	119
Sim MI	307	87	83	122	137	117	116	114	127	74	66	58	88	85	69

151+152+153 Chronic effects of morphine (240 mg/day) or heroin (95 mg/day); 154 Morphine or heroin withdrawal, 10th day
of dose reduction, strong opiate withdrawal; 154+168 Average of conditions 154 and 168; 168 Opiate withdrawal, weak in
general population addicts; 170 No-drug control group for general population with weak opiate withdrawal; 170+173 No-
drug; 173 No-drug general control test for simulation studies up to condition 248; 174 No-drug, simulation of no-drug
effect on the street, control tor simulation up to 248; 177 Simulated effect of a weak dose of an opiate on the street;
178 Simulated effect of a strong dose of an opiate on the street; 179 Simulated effect of a weak dose of an opiate on
the research ward; 180 Simulated effect of a strong dose of an opiate on the research ward, 181 Simulated effect of a
weak dose of an opiate during chronic administration; 182 Simulated effect of a strong dose of an opiate during chronic
administration.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.		183	183+ 209	184	185	186	187	189	192	192+ 195	195	196	196+ 222
N		50	99	43	36	32	9	7	9	16	7	54	103
Drug Conditions													
No-drug	00+91	89	93	179	114	103	145	89	81	129	232	121	115
MS	20	19	20	128	59	74	81	46	62	77	139	67	65
CYC+NAL	23+25	65	67	199	24	136	130	69	61	59	97	58	54
CPZ	40	97	97	241	73	155	161	55	33	59	135	110	100
LSD	51	63	65	51	119	32	70	107	163	182	248	83	87
Amph	60	21	22	94	77	44	61	58	83	105	173	72	73
Alc	81	45	47	178	39	124	140	84	178	67	107	15	18
Pent	31	39	40	192	26	124	123	48	32	39	90	38	36
Op W	154+168	175	172	227	215	157	160	141	139	198	314	217	206
Op Chr	151+152+153	137	136	231	147	150	165	107	107	134	209	168	158
Clinical Groups													
Addict	170+173	16	17	39	29	20	42	23	12	24	49	23	27
MI	26	44	45	74	64	50	65	60	50	68	100	60	58
Normal	28	77	78	108	112	83	92	97	97	110	137	91	100
Alc	86+87+88	85	83	92	119	79	89	93	81	109	155	94	98
Cr	94	71	72	102	98	77	80	84	66	90	130	95	97
Sim MI	307	86	89	94	53	82	75	68	79	64	55	84	71

183 Simulated effect of reefers; 183+209; 184 Simulated effect of cocaine; 185 Simulated effect of goofballs; 186 Simulated effect of pep pills; 187 Simulated effect of LSD; 189 Simulated effect of chlorpromazine; 192 Simulated effect of Miltown; 192+195; 195 Simulated effect of Doriden; 196 Simulated effect of alcohol; 196+222.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.		197	198	199	200	201	202	203	203+ 204	204	205	205+ 248	206	207
N		30	47	23	24	20	23	12	27	15	32	54	14	49
Drug Conditions														
No-drug	00+91	51	16	31	13	26	39	111	90	89	119	113	76	16
MS	20	65	41	59	35	55	45	166	124	115	181	179	110	71
CYC+NAL	23+25	57	84	94	69	106	49	161	113	114	204	203	122	131
CPZ	40	31	30	54	26	56	28	114	83	78	123	130	83	49
LSD	51	84	63	45	87	62	85	147	101	94	140	130	81	93
Amph	60	61	28	36	29	34	46	145	105	97	150	148	89	46
Alc	81	54	73	88	63	99	56	174	113	113	201	204	122	105
Pent	31	43	53	76	39	80	35	190	111	107	187	192	116	88
Op W	154+168	99	53	65	100	56	93	111	93	83	73	74	70	42
Op Chr	151+152+153	86	42	61	55	50	71	119	97	90	113	114	91	35
Clinical Groups														
Addict	170+173	27	9	19	12	13	17	70	61	57	64	62	47	4
MI	26	69	52	63	53	50	56	104	102	103	96	94	92	49
Normal	28	104	98	96	107	108	104	138	138	141	147	146	129	93
Alc	86+87+88	91	83	90	103	76	82	133	136	143	118	115	111	76
Cr	94	69	58	71	70	58	55	113	107	106	103	101	86	48
Sim MI	307	87	87	73	95	86	85	64	63	65	76	78	77	99

197 Simulated effect of morning after the use of alcohol; 198 Simulated effect of the morning after using opiates; 199 Simulated effect of the morning after using pep pills; 200 Simulated effect of the morning after using reefers; 201 Simulated effect of the morning after using cocaine; 202 Simulated effect of the morning after using goofballs; 203 Simulated effect of kicking an alcohol habit; 203+204; 204 Simulated effect of kicking a goofball habit; 205 Simulated effect of kicking an opiate habit; 205+248; 206 Simulated effect of come down after using pep pills continuously for 30 days; 207 Answer questions as the average addict under no-drug would answer them.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.	208	209	212	213	214	215	216	222	223	224	226	227
N	49	49	11	28	30	31	28	49	18	16	22	16
Drug Conditions												
No-drug 00+91	96	97	76	24	12	42	99	114	86	51	31	10
MS 20	29	21	142	87	49	41	134	69	67	53	68	57
CYC+NAL 23+25	89	71	167	108	102	86	131	56	131	129	126	94
CPZ 40	73	98	148	64	19	75	74	94	118	104	85	46
LSD 51	106	68	78	104	100	48	130	97	50	44	52	63
Amph 60	41	24	110	75	39	28	117	79	47	30	44	40
Alc 81	75	51	179	122	90	50	143	25	104	93	113	86
Pent 31	48	41	170	95	59	52	120	40	95	91	99	70
Op W 154+168	124	171	101	72	51	124	86	199	165	116	60	64
Op Chr 151+152+153	93	135	137	79	39	97	103	151	133	113	80	60
Clinical Groups												
Addict 170+173	23	17	25	8	3	16	60	35	45	13	6	7
MI 26	57	46	56	40	42	39	86	58	57	40	29	51
Normal 28	123	79	81	81	84	86	138	113	100	83	57	93
Alc 86+87+88	93	82	70	59	65	77	114	105	88	66	48	86
Cr 94	82	73	46	38	41	78	100	103	113	66	37	58
Sim MI 307	79	91	79	99	105	94	71	60	90	113	93	94

208 Answer questions as the average addict would when he is taking an opiate; 209 Answer questions as the average reefer user would when he is using reefers; 212 Simulated effect of experience felt during a disaster; 213 Simulated effect of experience felt during the death of a member of the family; 214 Simulated effect of experience felt upon getting up in the morning; 215 Simulated effect of experience felt during a party; 216 Simulated effect of the flu; 222 Answer questions as the average alcoholic would answer them when he has been drinking alcohol; 223 Simulated effect of experience felt during sexual intercourse; 224 Simulated effect of experience felt on a date with a woman; 226 Simulated miscellaneous nondrug conditions; 227 Simulated effect of come-off effect of using reefers for at least 30 days.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.		228	244	247	248	254	255	301	302	303	304	305	306	307
N		19	29	21	22	6	6	22	22	22	22	22	22	22
Drug Conditions														
No-drug	00+91	83	76	45	112	155	23	26	29	17	16	22	102	81
MS	20	121	16	105	185	95	77	68	67	60	47	50	35	123
CYC+NAL	23+25	165	62	159	212	88	129	152	135	119	116	127	75	110
CPZ	40	114	54	112	148	71	30	65	56	53	55	57	75	120
LSD	51	70	89	58	124	167	126	117	152	113	98	107	90	97
Amph	60	87	28	70	153	102	60	43	63	49	31	34	42	104
Alc	81	162	61	147	218	97	118	116	124	103	91	91	71	122
Pent	31	151	31	143	207	68	87	91	85	74	67	70	48	122
Op W	154+168	74	123	91	86	204	51	72	82	78	88	79	150	132
Op Chr	151+152+153	104	94	83	123	142	15	64	56	60	67	66	109	109
Clinical Groups														
Addict	170+173	43	15	14	61	37	10	12	44	27	8	8	43	116
MI	26	95	47	55	92	82	50	20	3	5	30	29	63	96
Normal	28	146	104	104	144	158	112	74	49	44	77	81	144	151
Alc	86+87+88	121	70	81	111	128	79	62	62	46	74	65	125	231
Cr	94	94	59	71	100	99	50	37	53	39	38	35	111	173
Sim MI	307	76	83	89	80	72	102	115	109	114	121	125	53	0

228 Simulated effect of come-off effect of using cocaine for at least 30 days in succession; 244 Simulated effect of opiate withdrawal; 247 Simulated effect of expecting a first shot of an opiate after having been off of opiates for a long time; 248 Simulated effect of not getting one's usual supply of opiates; 254 Pentazoxine, chronic 1 and ½ weeks; 255 Early chronic phase of being on 60 mg of morphine; 301 Answer questions as you would for your ideal self; 302 Answer questions as your mother would answer them; 303 Answer questions as your father would answer them; 304 Answer questions as you would have prior to using drugs; 305 Simulated effect of no-drug experience on the street; 306 Simulated effect of opiate; 307 Answer questions as a mentally ill person would answer them.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.		308	309	310	311	312	313	314	315	316	317	318	319	320
N		22	22	22	22	19	19	19	19	19	19	19	19	19
Drug Conditions														
No-drug	00+91	20	19	18	40	143	45	81	56	96	97	92	16	86
MS	20	63	51	88	112	180	34	150	93	178	157	164	47	23
CYC+NAL	23+25	119	117	133	126	202	123	154	55	191	198	210	124	69
CPZ	40	51	57	66	64	229	79	147	23	186	192	187	56	70
LSD	51	102	110	103	129	46	72	66	163	83	64	81	92	78
Amph	60	48	41	56	102	134	19	118	99	133	109	118	29	33
Alc	81	97	94	104	141	189	78	165	95	198	208	226	95	64
Pent	31	77	68	94	110	211	64	166	58	206	207	215	72	42
Op W	154+168	66	95	91	89	221	106	150	110	181	163	161	83	139
Op Chr	151+152+153	60	72	44	83	227	98	146	85	153	159	152	68	100
Clinical Groups														
Addict	170+173	8	12	41	22	24	9	26	21	41	10	17	4	23
MI	26	34	16	75	62	60	30	63	53	79	55	61	37	49
Normal	28	89	58	164	108	85	68	101	101	146	91	90	70	109
Alc	86+87+88	58	56	170	102	83	60	92	101	151	82	99	66	88
Cr	94	49	36	114	68	87	45	83	76	118	60	74	36	79
Sim MI	307	94	119	85	81	81	122	81	68	61	88	77	120	66

308 Answer questions as an average alcoholic would when he is not using alcohol; 309 Answer questions as the average man on the street would answer them; 310 Answer questions as the average criminal would answer them; 311 Answer questions as you would when feeling depressed; 312 Answer questions as you would when feeling excited; 313 Answer questions as you would when feeling pleasant; 314 Answer questions as you would when feeling nervous; 315 Answer questions as you would when feeling tired; 316 Answer questions as you would when feeling angry; 317 Answer questions as you would when you are doing something dangerous; 318 Answer questions as you would when you are about to do something that is dangerous; 319 Answer questions as you would on the street under no-drug;320 Simulated effect of an opiate.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.		321	322	510	511	512	513	515	516	517	518	519
N		19	19	5	5	5	5	4	5	5	4	4
Drug Conditions												
No-drug	00+91	23	90	33	38	94	59	82	36	22	59	38
MS	20	95	166	99	50	116	87	144	124	111	159	109
CYC+NAL	23+25	111	191	179	83	171	168	154	180	156	193	150
CPZ	40	44	175	87	39	63	56	75	99	55	94	63
LSD	51	120	84	120	103	229	164	141	111	129	126	110
Amph	60	84	134	70	34	110	72	126	79	80	112	74
Alc	81	111	206	132	85	168	147	146	151	132	143	118
Pent	31	87	249	122	52	116	106	132	144	114	153	110
Op W	154+168	76	140	65	118	103	58	59	72	61	101	76
Op Chr	151+152+153	60	154	65	54	36	23	102	64	64	80	65
Clinical Groups												
Addict	170+173	20	25	9	38	28	24	63	19	26	57	43
MI	26	59	63	40	78	62	59	117	64	77	107	82
Normal	28	112	99	98	118	117	102	174	108	126	190	148
Alc	86+87+88	114	86	86	137	117	118	149	123	143	213	183
Cr	94	74	74	58	103	78	75	112	76	88	139	115
Sim MI	307	79	79	99	86	75	69	88	86	81	73	68

321 Answer questions as you would when feeling bored; 322 Answer questions as you would when feeling afraid;
510 No-drug control for methadone study; 511 Methadone - 10 mg after 1 week of chronic administration; 512
Methadone - 60 mg level after four weeks of chronic administration; 513 Methadone - 100 mg level after 10
weeks of chronic administration; 515 Methadone - fourth week after complete stopping of drug administration.
516 Methadone - eighth week after complete stopping of drug administration; 517 Methadone - 12th week after
complete stopping of drug administration; 518 Methadone - 16th week after complete stopping of drug administration;
519 Methadone - 20th week after complete stopping of drug administration.

APPENDIX TABLE 4 (CONTINUED)

SUM OF t^2 CONTINUED

Condition Nos.	901	902	903	904
N	27	30	31	32
Drug Conditions				
No-drug 00+91	9	55	37	56
MS 20	64	60	73	77
CYC+NAL 23+25	95	56	86	76
CPZ 40	29	30	20	25
LSD 51	96	128	158	163
Amph 60	52	72	81	90
Alc 81	79	37	83	68
Pent 31	58	20	47	37
Op W 154+168	87	127	111	123
Op Chr 151+152+153	48	100	78	93
Clinical Groups				
Addict 170+173	57	52	58	52
MI 26	43	42	49	47
Normal 28	16	17	14	17
Alc 86+87+88	96	93	97	95
Cr 94	92	91	89	85
Sim MI 307	107	89	111	106

901 Normal Ss, no-drug control for conditions 902, 903, and 904; 902 Normal Ss, Secobarbital - 200 mg; 903 Normal Ss, meprobamate - 800 mg; 904 Normal Ss, meprobamate - 400 mg plus secobarbital - 100 mg.

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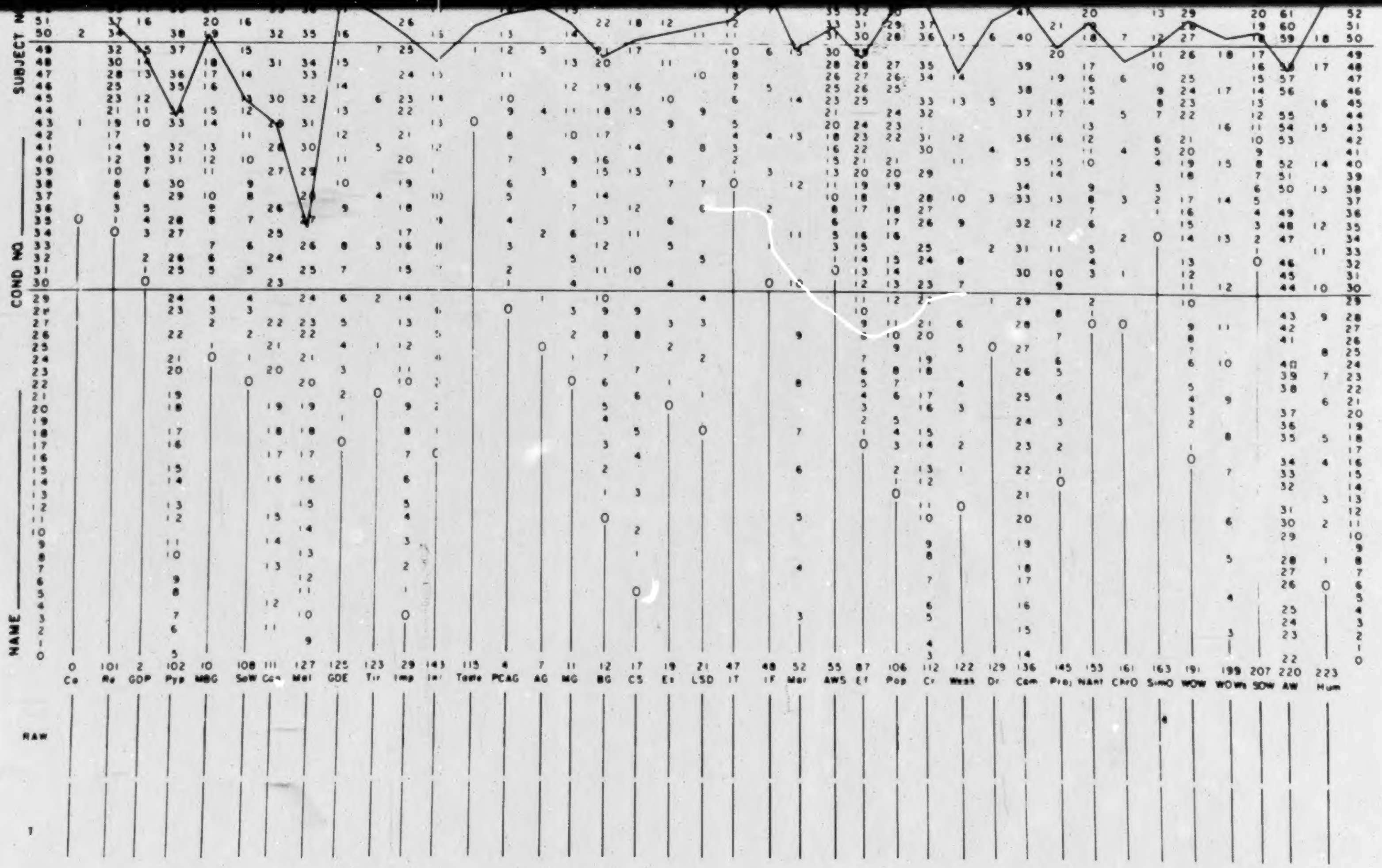

ARCI T-SCORE TRANSFORMATION SHEET WITH NORMAL PROFILE

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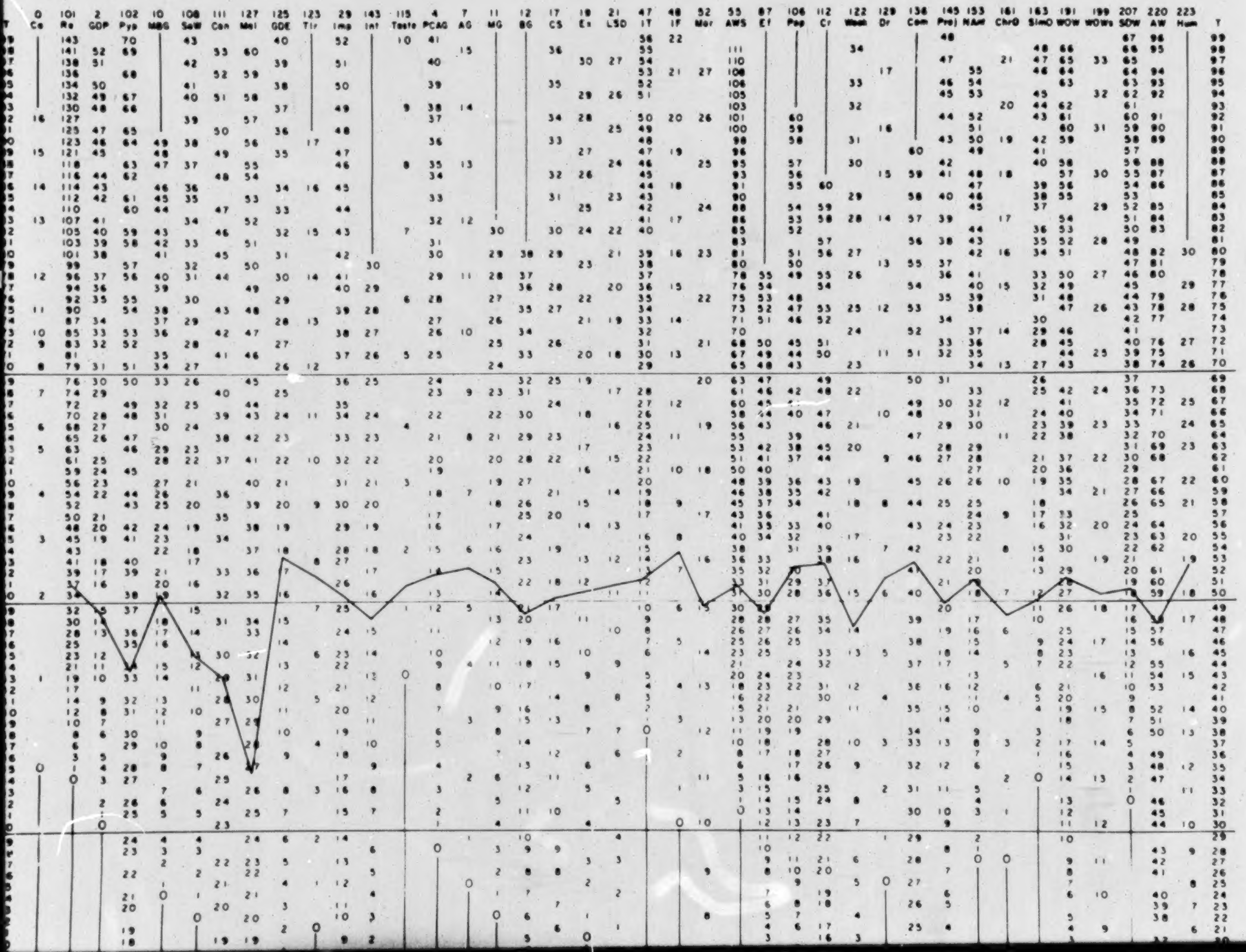
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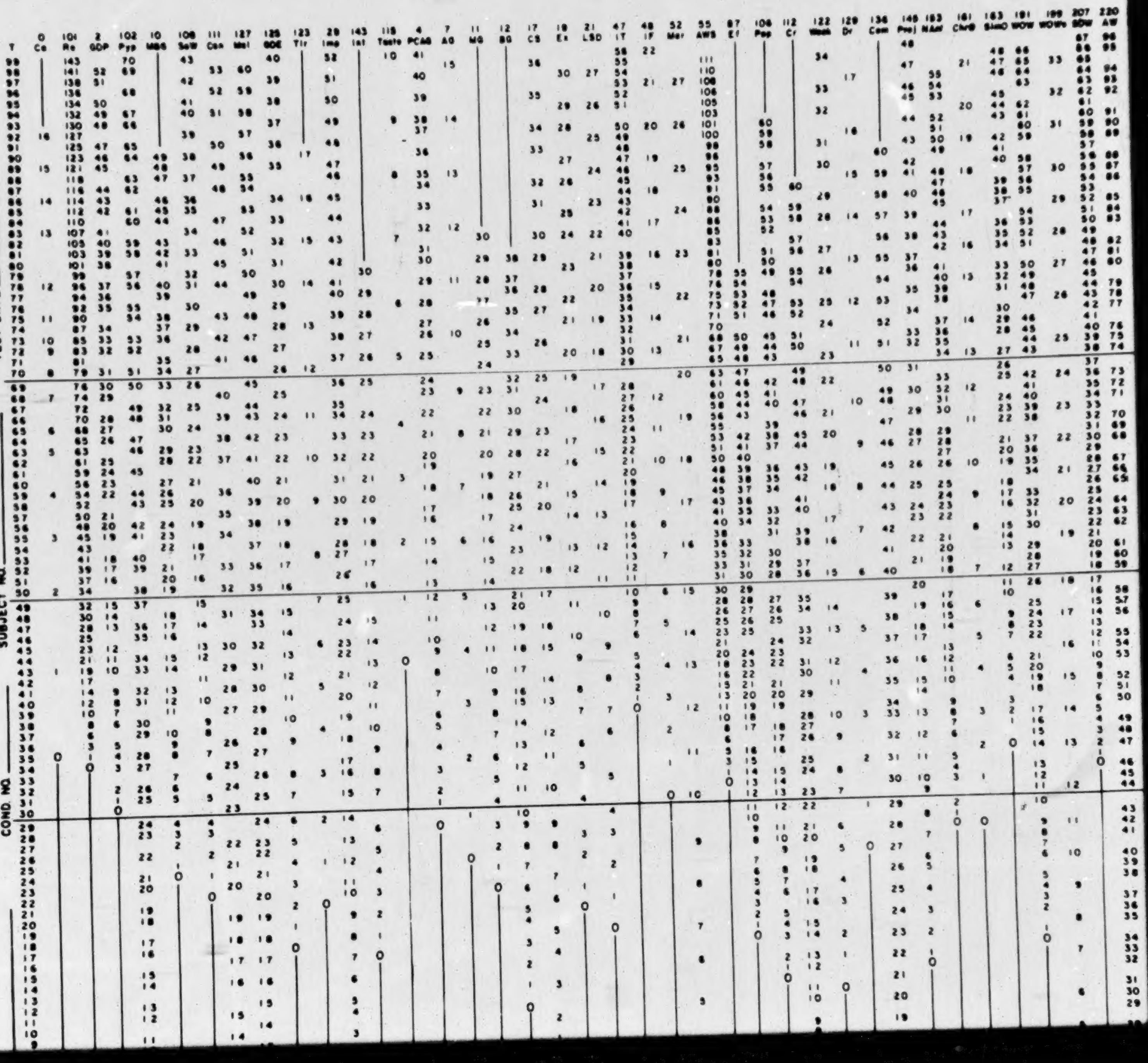

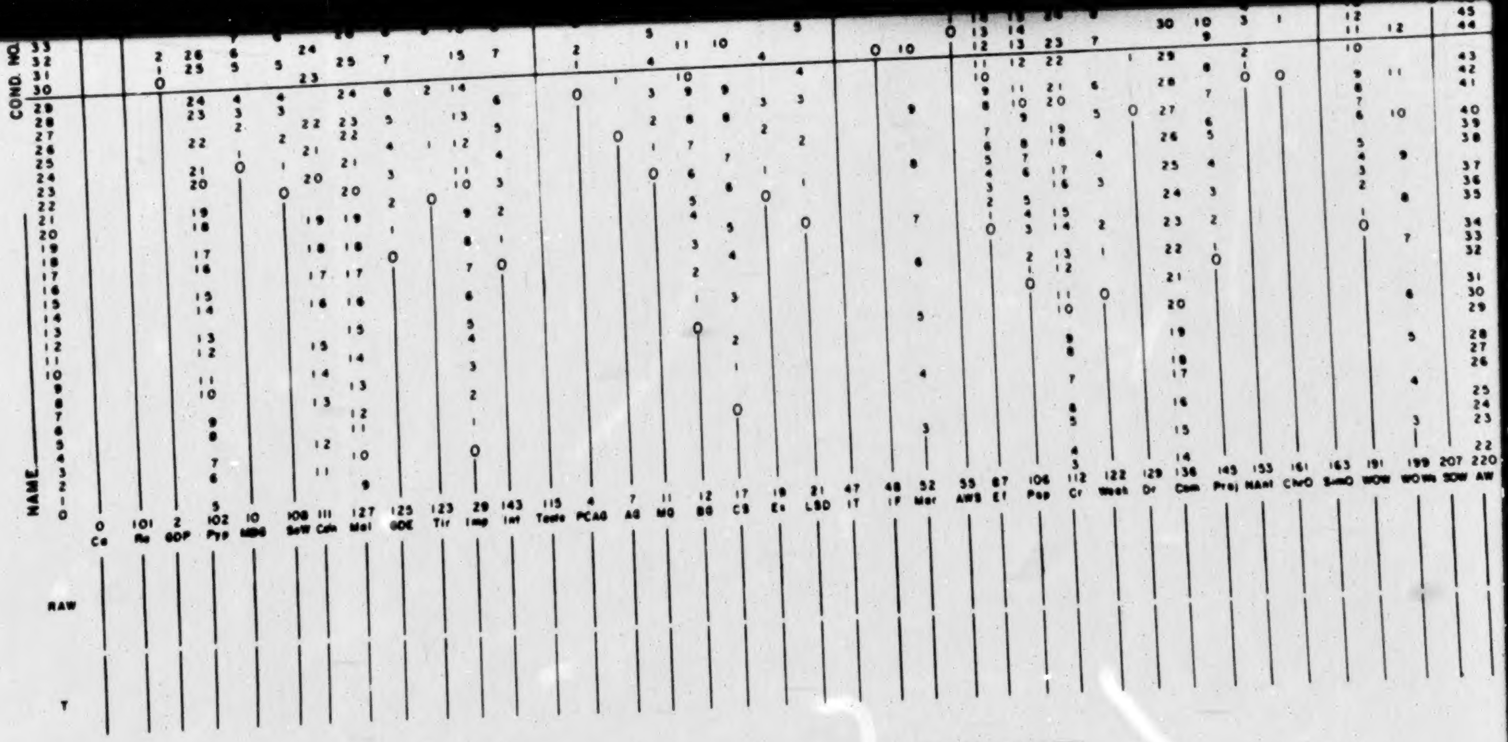

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